

**THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS**

THE HOLMES GROUP, INC.,

Plaintiff,

v.

WEST BEND HOUSEWARES, LLC and
FOCUS PRODUCTS GROUP, LLC

Defendants.

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) CA No. 05-CV-11367-WGY
) (Alexander, M.J.)
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**DEFENDANTS' STATEMENT OF MATERIAL FACTS AS TO WHICH THERE
ARE NO GENUINE ISSUES OF DISPUTE AND WHICH ENTITLE DEFENDANTS
TO PARTIAL SUMMARY JUDGMENT OF NONINFRINGEMENT**

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Attorneys for the Defendants

July 19, 2006

Pursuant to Rule 56.1 of the Local Rules for The United States District Court for the District of Massachusetts, defendants West Bend Housewares, LLC and Focus Products Group, LLC submit the following statement of material facts as to which there are no genuine issues of dispute and which entitle defendants to partial summary judgment of noninfringement.

I. INTRODUCTION

1. Plaintiff The Holmes Group (“Holmes”) accuses defendants West Bend Housewares, LLC and Focus Products Group, LLC of infringing Holmes’ U.S. Patent Nos. 6,573,483 (“the ‘483 patent”) (Ex. A) and 6,740,855 (“the ‘855 patent”) (Ex. B), both entitled “Programmable Slow-Cooker Appliance.” The ‘855 patent is a continuation of the ‘483 patent. *See* Ex. N, Complaint.

2. In response to West Bend’s interrogatories, Holmes alleges that West Bend’s programmable “Crockery” slow cooker Model No. 84386 literally infringes claims 13, 14, 17 and 19 of the ‘483 patent and claims 20, 24, 26, 27 and 29 of the ‘855 patent. Holmes does not assert infringement under the doctrine of equivalents. *See* Ex. C, Holmes’ Second Supplemental Response to West Bend’s First Set of Interrogatories at 3 and attached “Exhibit A”.

3. Holmes is a Massachusetts corporation having a principal place of business at One Holmes Way, Milford, Massachusetts. Ex. N.

4. West Bend Housewares, LLC is a limited liability company organized under the laws of Illinois having a principal place of business at 2845 Wingate Street, West Bend, Wisconsin. In its answer to the complaint, West Bend Housewares, LLC denies infringement and asserts that the patents-in-suit are invalid. In addition, it has filed a counterclaim (1) seeking a declaration that the patents-in-suit are invalid and not infringed, and (2) asserting that Holmes infringes three U.S. design patents owned by West Bend Housewares, LLC relating to slow-

cookers, namely: U.S. Patent No. Des. 434,266; U.S. Patent No. Des. 444, 664; and U.S. Patent No. 444,993. *See* Ex. O, West Bend's Answer and Counterclaim.

5. Focus Products Group, LLC is also a limited liability company organized under the laws of Illinois and has a principal place of business at 120 Lakeview Parkway, Vernon Hills, Illinois. West Bend Housewares, LLC is a wholly-owned subsidiary of Focus Products Group, LLC. In its answer to the complaint, Focus Products Group, LLC denies infringement and asserts that the patents-in-suit are invalid. In addition, it has filed a counterclaim seeking a declaration that the patents-in-suit are invalid and not infringed. *See* Ex. P, Focus Products Group's Answer and Counterclaim. Hereinafter, for purposes of the present summary judgment motion, West Bend Housewares, LLC and Focus Products Group, LLC shall be collectively referred to as "West Bend."

6. This patent infringement case relates to slow-cookers that allow a user to select a cooking time and temperature with a programmable controller that automatically lowers the selected temperature to a warm mode after the cooking time elapses.

II. The '483 Patent

7. The '483 patent issued on June 3, 2003, from an application filed on March 8, 2001. The '483 patent claims priority from two provisional applications filed on March 15 and April 5, 2000. The patent is directed to a programmable slow cooker appliance where the programmable controller is mounted to the outside of the appliance via a housing in order to prevent the controller from overheating. Ex. A, the '483 patent at col. 1, *ll.* 38-43.

A. The '483 Patent Specification

8. According to the '483 patent, some slow-cooker appliances that provide all-day cooking only permit one cooking temperature to be set, potentially subjecting the cooked food to over- or under-cooking. While "[a]nother option may be to use a cooking unit with a controller,

where a user may set a time or temperature desired,” such units “tend to be quite a bit larger and more expensive than slow-cooker appliances.” The patent explains that if such programmable cookers are made smaller, they “suffer because the controller inevitably must be placed near the heating element.” Thus, “[w]hat is needed is a slow cooker unit in which the controller does not become overheated and damaged by the heating element.” *Id.* at col. 1, *ll.* 9-28.

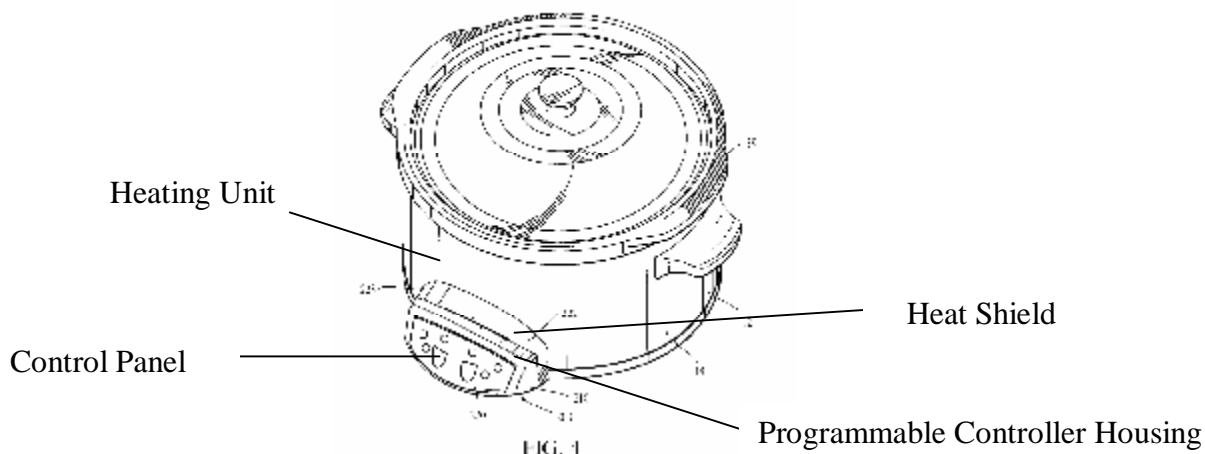
9. To accomplish this objective, the ‘483 specification describes a single slow-cooker embodiment with a programmable controller mounted to the outside of the heating unit. No alternative locations for the controller are described or contemplated in the patent. *Id.* at col. 1, *ll.* 38-44; col. 3, *ll.* 12-15, 27-31, 53-56.

10. For example, the ‘483 patent describes the location of the programmable controller as follows:

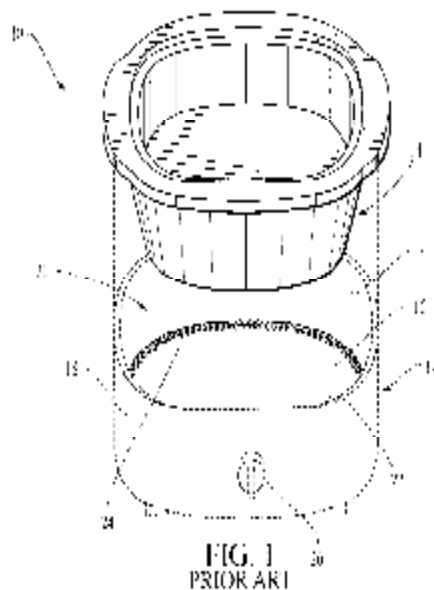
- “[t]he appliance includes a programmable controller mounted on its outside, and preferably mounted via a controller housing, which acts to insulate the controller from the heat of the appliance” *Id.* at col. 1, *ll.* 38-40;
- “[t]he housing, on the side of the slow-cooker appliance, utilizes ventilation holes on its bottom and top to encourage a chimney effect, in which cool air from the surroundings is drawn into ventilation slots or holes at the bottom of the housing” *Id.* at col. 1, *ll.* 43-47;
- “[t]he control 200 preferably includes a circuit board housing 210, a control panel 220, and an insulation shield 222 assembled together for attachment to the outer sidewall 18 of the heating unit 12” *Id.* at col. 3, *ll.* 12-15;
- “[t]his . . . locates the controls and componentry within the housing 210 away from a significant amount of the heat generated by the appliance 10” *Id.* at col. 3, *ll.* 27-31; and
- “[t]o further protect the electric componentry within the housing 210 from the heat generated by the appliance 10, the annular shield member 222 is preferably sized for interposition between the heating unit 12 and the housing 210” *Id.* at col. 3, *ll.* 53-56.

11. Figure 4 of the patent reproduced below and annotated illustrates the sole embodiment disclosed. The control module (200) includes a circuit board housing (210), a

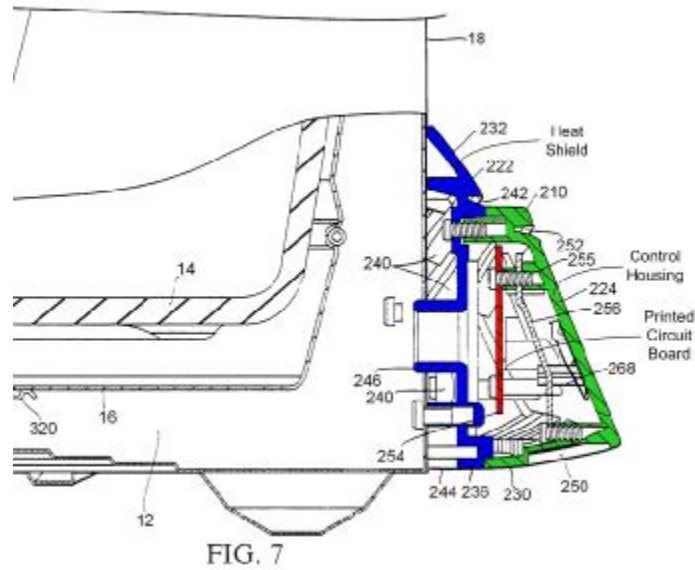
control panel (220) for inputting desired cooking parameters and an insulation heat shield (222) that are assembled together for attachment to the outer sidewall (18) of the heating unit (12). (The control panel (220) is also designated by reference number “224” in the patent specification and figures.) Ex. A at col. 3, *ll.* 1-61.



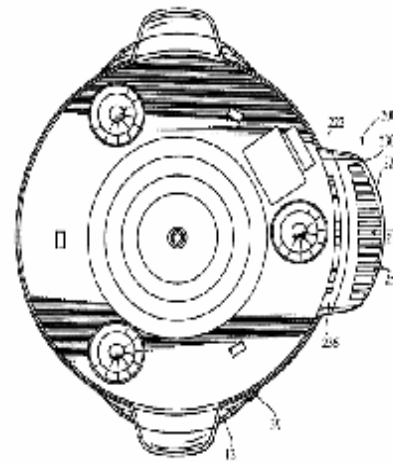
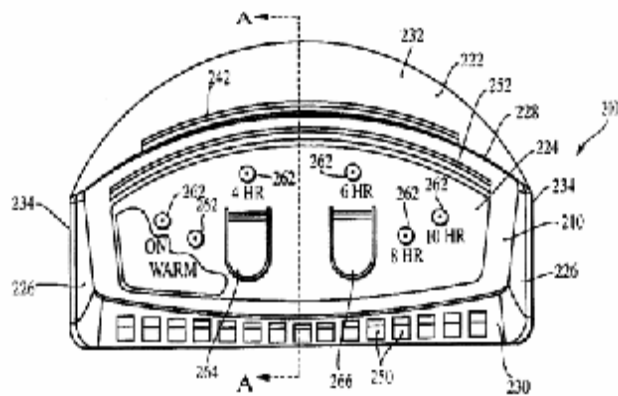
12. As shown in patent Figure 1 below, the cooker (10) comprises a heating unit (12) and a cooking unit (14) that is removably received in a well-like heating chamber (20). The interior bottom (16) and sidewall (17) define the heating chamber (20) and are surrounded by the outer sidewall (18) of the cooker. A heating element (24) is disposed either around the interior sidewall (17) or under the bottom (16). (Figure 1, although designated by Holmes as illustrating a prior art cooker, was nonetheless also used by Holmes in both patents-in-suit to describe components of the patented cookers.) Ex. A at col. 2, *ll.* 33-47.



13. As shown in patent Figure 7 below, which has been annotated and colored, the circuit board (254) (red), on which the programmable controller (302) is located, is mounted in the interior of housing (210) (green) with the annular heat insulation shield (222) (blue) interposed between the heating unit (12) and the housing (210). *Id.* at col. 3, *ll.* 12-18, 53-56; col. 4, *ll.* 48-51. “The shield 222 acts as a ventilated spacer to hold the electronic components and the housing 210 at a distance away from the sidewall of the cooking unit 12.” *Id.* col. 3, *ll.* 59-61.



14. As shown in patent Figures 5 and 6 below, openings (250) are provided in the bottom of controller housing (210) and an elongated slot (252) is provided on the upper front face (224) of the housing (210) to promote air circulation through the housing. This air circulation creates a chimney effect in which cool air from the surroundings is drawn into the housing (210) through the bottom openings (250), flows upward to cool the programmable controller and is expelled from the top slot (252), convecting heat away from the controller. *Id.* at col. 1, *ll.* 38-49; col. 4, *ll.* 11-27.



15. In one mode of operation, a user pushes a single button (the COOK button) to set the cooking time and temperature. Multiple pushes of the COOK button select a four, six, eight or ten hour cooking cycle, with the cooker on full power. Selection of a four or six hour cook cycle defaults to a HI cooking temperature and selection of an eight or ten hour cook cycle defaults to a lower cooking temperature. After the selected cooking time elapses, the appliance automatically reduces to half power to a lower warm temperature until the user pushes the OFF button or unplugs the unit. *Id.* at col. 5, *l.* 50 to col. 6, *l.* 19.

16. In another mode of operation, the user can independently set the cooking time and temperature. When the unit is plugged in, it defaults to a 150 degrees F. cooking temperature. A user may then adjust the desired cooking temperature in 25-degree increments upwards from the default temperature. *Id.* at col. 6, *ll.* 43-58. The user may also select a cooking time in 15-minute increments. The cooking time counts down in 1 minute increments until the cooking time elapses and the power is shut off. *Id.* at col. 6, *l.* 62 to col. 7, *l.* 2.

B. The Asserted Claims Of The ‘483 Patent

17. The ‘483 patent contains 19 claims, of which claims 13, 14, 17 and 19 have been asserted against West Bend. Ex. C at attached “Exhibit A”. Of these four claims, only claim 13 is independent. Claims 14, 17 and 19 each depending directly from claim 13.

18. Claim 13 and its dependent claims recite a method of using a programmable slow cooker that uses “a programmable controller mounted to a housing fixedly mounted to a heating unit.” The underlined portion of claim 13 below indicates the only limitation of the claim at issue in the present summary judgment motion.

13. A method of using a programmable slow-cooker appliance, the method comprising:

providing a food item;

placing the food item into a cooking unit of the slow-cooker appliance;

selecting a cooking temperature and time using a programmable controller mounted to a housing fixedly mounted to a heating unit; and

changing the heating unit temperature automatically to a lower temperature after the selected time.

Ex. A at col. 8, *ll.* 27-36.

19. Dependent claims 14, 17 and 19 add features to the cooking method recited in Claim 13 that are not relevant for purposes of the present motion. *Id.* at col. 8, *ll.* 37-52.

C. The ‘483 Patent Prosecution History

1. The First Office Action And Response

20. The claims as originally filed with the ‘483 patent application were all rejected by the patent examiner as unpatentable over the cited prior art. *See* Ex. D, ‘483 First Office Action. The examiner’s first Office Action was brief, and simply identified claims 1-7, 9 and 11-13 as “being clearly anticipated by Rivelli et al.” and claims 8, 10 and 14-19 as obvious in view of Rivelli U.S. Patent No. 3,904,852 (Ex. E) and Yung U.S. Patent No. 6,196,113 (Ex. F).

21. In response, Holmes described Rivelli as providing “thick insulation to retard heat transfer into control compartment 54 and computer module 26” and “clearly designed to insulate the controller from heat.” *See* Ex. G, ‘483 Response to First Office Action at 2. In contrast to the Rivelli “thermally insulated” controller housing, Holmes argued that the ‘483 patent application claimed a slow-cooker and a method of using a slow-cooker where the controller housing “uses slots in the top and bottom” to convect heat away from the controller to create a “chimney effect” for cool air flow through the housing.

Claim 1 states that the housing is designed to convect heat away from the controller, while Rivelli is clearly designed to insulate the controller from heat. Claim 11 claims these top and bottom openings specifically, which top and bottom openings are not present in Rivelli.

Id.

22. Holmes characterized claim 13 as a method of using the slow-cooker of claim 11, thus indicating that claim 13 is limited in scope to a method of using a slow cooker having a controller housing mounted to the outside of the heating unit that convects heat away from the controller, as recited in claim 11. *Id.* Holmes said:

Claim 12 depends from claim 11, and claim 13 is a method of using this slow-cooker appliance.

Id.

2. The Second Office Action And Response

23. In a second Office Action, the examiner again rejected all the claims, this time as obvious in view of Rivelli in combination with various other patents. *See* Ex. H, '483 Second Office Action.

24. In its response, Holmes amended claim 13 to describe the programmable controller as mounted to a housing that is fixedly mounted to the heating unit. *See* Ex. I, '483 Response to Second Office Action at 4. Specifically, Holmes amended claim 13 to distinguish over the prior art as follows (the underlined portion indicates language added by Holmes):

13. (Amended) A method of using a programmable slow cooker appliance, the method comprising:

providing a food item;

placing the food item into a cooking unit of the slow-cooker appliance;

selecting a cooking temperature and time using a programmable controller mounted to a housing fixedly mounted to a heating unit; and

changing the heating unit temperature automatically to a lower temperature after the selected time.

Holmes explained that the above amendment was made "to better describe the fixed mounting of the housing to the *exterior* of the heating unit". *Id.* at 4 (emphasis added).

25. Holmes' arguments for the patentability of claim 13 (and the other two independent claims) relied on the location of the programmable controller and its housing mounted to the outside of the heating unit as the primary feature that distinguished the claimed cooker from the prior art.

- “[T]he combination [of cited references] does not yield the *claimed invention* of claim 1, 11 and 13, which is a programmable slow-cooker appliance comprising a heating unit, a cooking unit, *a controller housing mounted outside the heating unit, and a programmable controller mounted to the housing, where heat is convected away from the housing.*”
- “The combination [of cited references] does not describe or suggest a device having a controller housing mounted *outside the heating unit* nor having other claimed features, such as those that would allow convection to occur.”
- “The combination [of cited references] does not yield a cooking implement having a *controller fixedly mounted to an outside of the housing, since the control module of Rivelli is contained within the single housing*, while the controller of Skutt is only hingedly mounted to the exterior of the housing.”
- “As mentioned above, neither Rivelli nor Frey describe [sic] a housing for a programmable *controller fixedly mounted to the outside of the heating unit.*”
- “Therefore, even an improper combination of [cited references] does not describe or suggest the claimed invention including, *a controller housing mounted fixedly to the outside of the heating unit.*”

Id. at 3-5 (emphases added).

26. Holmes also argued that, unlike its claimed invention, Rivelli “has no convection cooling whatever,” “uses insulation to prevent conduction of heat to the controller” and “does not use convection to carry heat away from the controller.” *Id.* at 3.

27. Likewise, Holmes distinguished the prior art Yung cooker because it uses internal circulation to cool the controller and “fails to describe a housing for a controller mounted outside the heating unit. In Yung, a programmable controller is mounted inside the housing, not outside.” *Id.* at 5.

28. Holmes *defined* the invention recited in claim 13 of the ‘483 patent as using a slow-cooker having a programmable controller mounted to the outside of the heating unit in a housing that convects heat away from the controller. *Id.* at 3.

29. Accepting Holmes’ claim amendments and arguments focusing on the importance of mounting the programmable controller in a housing to the outside of the heating unit and the use of convection cooling to keep the controller from overheating as distinguishing the prior art, the examiner issued a notice of allowability as to all claims, with no statement of reasons for allowance. (The claims of the ‘483 patent are numbered the same as they were in the application.) *See* Ex. S, ‘483 Notice of Allowance at 1.

III. The ‘855 Patent

30. The ‘855 patent issued on May 25, 2004, as a continuation of the ‘483 patent.

A. The ‘855 Patent Specification

31. The ‘855 specification is essentially the same as the ‘483 specification and only describes a single embodiment of a slow-cooker with an outside-mounted housing for a programmable controller.

B. The Asserted Claims Of The ‘855 Patent

32. Of the 42 claims in the ‘855 patent, claims 20, 24, 26, 27 and 29 have been asserted against West Bend. Ex. C at attached “Exhibit A”. Of these, claim 20 is the only independent claim.

33. The underlined portions of claim 20 below indicate the claim limitations at issue in the present motion for summary judgment.

20. A programmable slow-cooker appliance comprising:

a heating unit including a bottom and a continuous sidewall extending from said bottom, said bottom and said continuous sidewall defining a well-like chamber, said continuous sidewall including an outer sidewall and an interior sidewall;

a heating element mounted to said heating unit and disposed between said outer sidewall and said interior sidewall;

a housing fixedly mounted to and projecting outside said continuous sidewall of said heating unit;

a programmable circuit positioned within said housing and configured to automatically switch said heating element from a cook mode to a lower temperature warm mode at the end of a set cooking time;

a control panel mounted to said housing and including a user interface connected to said programmable circuit for selecting a cooking temperature and cooking time; and

a cooking unit removably positioned in said well-like chamber.

Ex. B, the '855 patent at col. 9, *ll.* 17-38.

34. Dependent claims 24, 26, 27 and 29 add features to the slow-cooker of claim 20 that are not relevant for purposes of the present motion. *Id.* at col. 9, *ll.* 53-57, *l.* 62 to col. 10, *l.* 3; col. 10, *ll.* 6-9.

C. The '855 Patent Prosecution History

1. First And Second Preliminary Amendments

35. Two preliminary amendments were filed in the '855 patent application before it was examined by the Patent Office. *See* Ex. Q, '855 First Preliminary Amendment; *See* R, '855 Second Preliminary Amendment. The second preliminary amendment cancelled all previous pending claims and added new claims that focused on the convection feature of the controller housing to keep the controller cool. *See* Ex. R. Application claim 53, as subsequently amended, issued as claim 20 in the '855 patent, which is the only independent claim of the '855 patent asserted here.

2. July 2003 Office Action Response

36. On July 30, 2003, the patent examiner issued an Office Action rejecting all claims as obvious in view of Rivelli (Ex. E) and other prior art. *See* Ex. J, '855 First Office Action.

37. In response, Holmes argued that although “concerned with protecting solid state components from overheating,” Rivelli “does not have applicability to slow cookers” because Rivelli’s programmable circuit housing is mounted inside the heating unit “rather than projecting from an outer sidewall as described in the independent claims of the present application.” *See* Ex. K, ‘855 Response to First Office Action at 16.

38. Claim 53 (‘855 patent claim 20) was amended specifically to describe, among other things, the location of the programmable controller and its housing mounted to the outside of the heating unit. *Id.* at 6. Holmes amended claim 53 to distinguish over the prior art as follows (the underlined portions indicate additions and the strikeouts indicate deletions by Holmes):

53. (Currently Amended) A programmable slow-cooker appliance comprising:

a heating unit including a bottom and a continuous sidewall extending from said bottom, said bottom and said continuous sidewall defining a well-like chamber, said continuous sidewall including an outer sidewall and an interior sidewall;

a heating element mounted to said heating unit and disposed between said outer sidewall and said interior sidewall;

a housing fixedly mounted to and projecting outside said continuous sidewall of said heating unit;

a programmable circuit positioned within said housing ~~including means for automatically switching~~ and configured to automatically switch said heating element from a cook mode to a lower temperature warm mode at the end of a set cooking time;

~~means~~ a control panel mounted to said housing and including a user interface connected to said programmable circuit for selecting a cooking temperature and cooking time; and

~~means for ventilating said housing; and~~

a cooking unit removably positioned in said well-like chamber.

Id. at 7-8.

39. The examiner then allowed the application explaining, in pertinent part, that the prior art of record does not teach: “. . . as per claims 53-75, use of a separate control housing of thermoplastic materials which projects outward from the sidewall and is fixedly mounted to control the slow cooker.” *See* Ex. L, ‘855 Notice of Allowance at 2.

IV. West Bend’s Programmable Slow Cooker

40. The West Bend slow cooker comprises a heating unit that holds a removable ceramic cooking vessel in which food is cooked. The slow cooker is operated by a user through a control panel positioned on the front of the heating unit. *See* Ex. M, Feinberg Decl. at ¶ 6.

41. The heating unit is formed by exterior and interior sidewalls that are spaced apart to define a cavity between them. A base supports the outer sidewall and closes the bottom of the heating unit. The interior sidewall and interior bottom of the heating unit form a heating well to receive the cooking vessel. *Id.* at ¶ 7.

42. A heating element is secured around the circumference of the interior sidewall of the heating well within the heating unit. *Id.* at ¶ 7.

43. As explained in more detail below, a user of the cooker can select cooking times and temperatures by pushing buttons on the control panel. There are no electronic or electrical components mounted to the control panel. The control panel also has a transparent window for viewing the time and temperature. *Id.* at ¶ 8.

44. When the control panel buttons are pushed, they actuate switches mounted on a first circuit board, which is located behind the control panel and inside the heating unit. Each switch on the first circuit board corresponds to and is positioned behind a push button on the control panel. *Id.* at ¶ 9.

45. The first circuit board is mounted to the inside of a plastic housing that is, in turn, mounted to the inside of the heating unit. The first circuit board lies entirely inside of the

heating unit. The first circuit board is not mounted to the control panel. The control panel is mounted to the outside of the heating unit, independent of the first circuit board and its housing. *Id.* at ¶ 10.

46. The switches on the first circuit board provide the user-selected cooking information (in the form of electrical signals) to a programmable controller located on the second circuit board. Wires connect the first circuit board to the second circuit board. *Id.* at ¶ 11.

47. The second circuit board and the programmable controller are positioned within a plastic housing that is mounted to and located entirely within the base of the heating unit. Thus, the programmable controller and the housing in which it is mounted lie entirely within the base of the heating unit. *Id.* at ¶ 12.

48. Neither the first circuit board nor any of the components mounted on it is programmable or includes any circuitry or logic to control or program the cooking cycles and temperatures of the cooker. The first circuit board and the components attached to it are incapable of automatically switching the heating element from a cook mode to a lower temperature warm mode at the end of a set cooking time. Those functions are performed by the programmable controller (which, as noted, is mounted to the inside of the heating unit). *Id.* at ¶ 13.

49. The programmable controller of the West Bend cooker is the only component of the West Bend cooker that is programmed to operate the heating element in accordance with the selected cooking parameters (i.e., cooking time and temperature) and to automatically lower the cooking temperature to a warm mode after the selected time elapses. The first circuit board and the components mounted thereon act as the interface between the user and the programmable controller. *Id.* at ¶ 13.

50. A thermal insulation pad is placed between the heating well and the housings for both the first circuit board and the second circuit board. The thermal insulation pad is designed to prevent the electronic components from overheating while the cooker operates. *Id.* at ¶ 14.

Respectfully Submitted,

Dated: July 19, 2006

WEST BEND HOUSEWARES, LLC
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CERTIFICATE OF SERVICE

I certify that, on July 19, 2006, this document filed through the ECF system will be sent electronically to the registered participants as identified on the Notice of Electronic Filing (NEF) and paper copies will be sent to those indicated as non-registered participants.

/s/ Erik P. Belt

Erik Paul Belt

EXHIBIT A

US006573483B1

(12) **United States Patent**
DeCobert et al.

(10) **Patent No.:** **US 6,573,483 B1**
(45) **Date of Patent:** **Jun. 3, 2003**

(54) **PROGRAMMABLE SLOW-COOKER APPLIANCE**

(75) Inventors: **James E. DeCobert**, Attleboro, MA (US); **Lorens G. Hlava**, Clinton, MO (US); **Charles T. Thrasher, Jr.**, Clinton, MA (US)

(73) Assignee: **The Holmes Group, Inc.**, Milford, MA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/802,174**

(22) Filed: **Mar. 8, 2001**

Related U.S. Application Data

(60) Provisional application No. 60/189,443, filed on Mar. 15, 2000, and provisional application No. 60/196,273, filed on Apr. 5, 2000.

(51) **Int. Cl.**⁷ **H05B 1/02**

(52) **U.S. Cl.** **219/506; 219/494; 219/497; 219/435; 219/432; 99/340**

(58) **Field of Search** **219/433, 432, 219/435, 506, 494, 518; 99/340**

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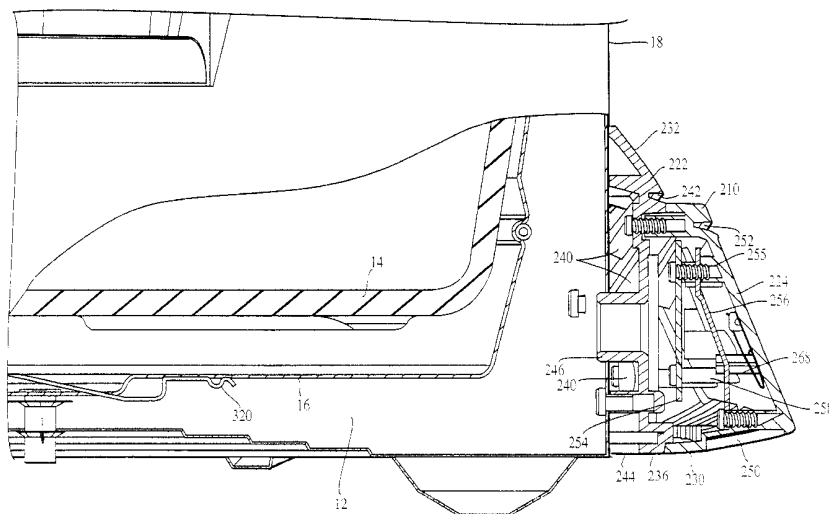
Primary Examiner—Mark Paschall

(74) *Attorney, Agent, or Firm*—Brinks Hofer Gilson & Lione

(57) **ABSTRACT**

A programmable slow-cooker appliance, in which a user sets a time and temperature for cooking a food item. A programmable controller prevents the unit from being used solely as a "keep warm" appliance, and a unique design allows cooling of the controller during cooking.

19 Claims, 12 Drawing Sheets

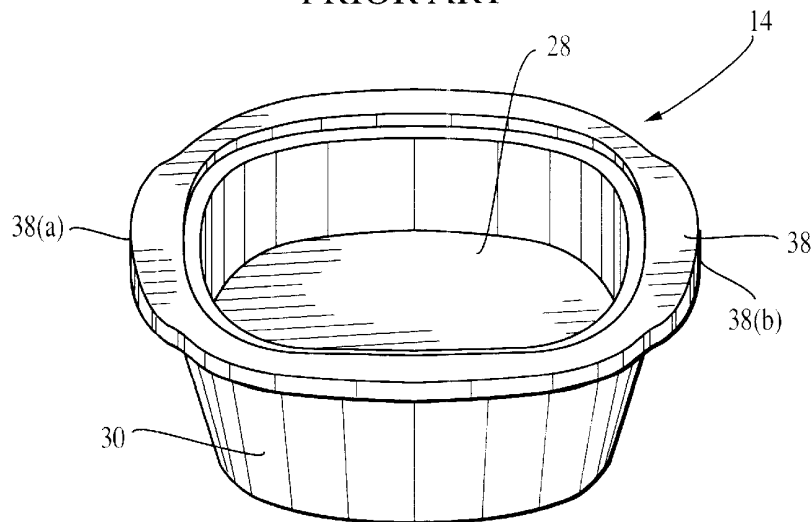
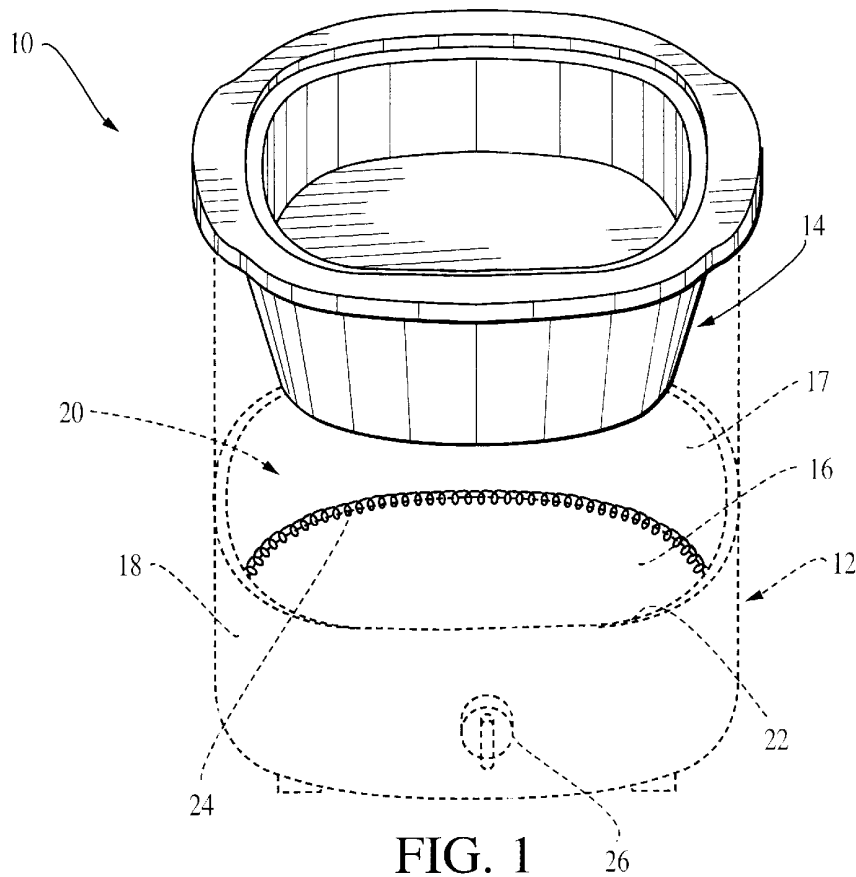


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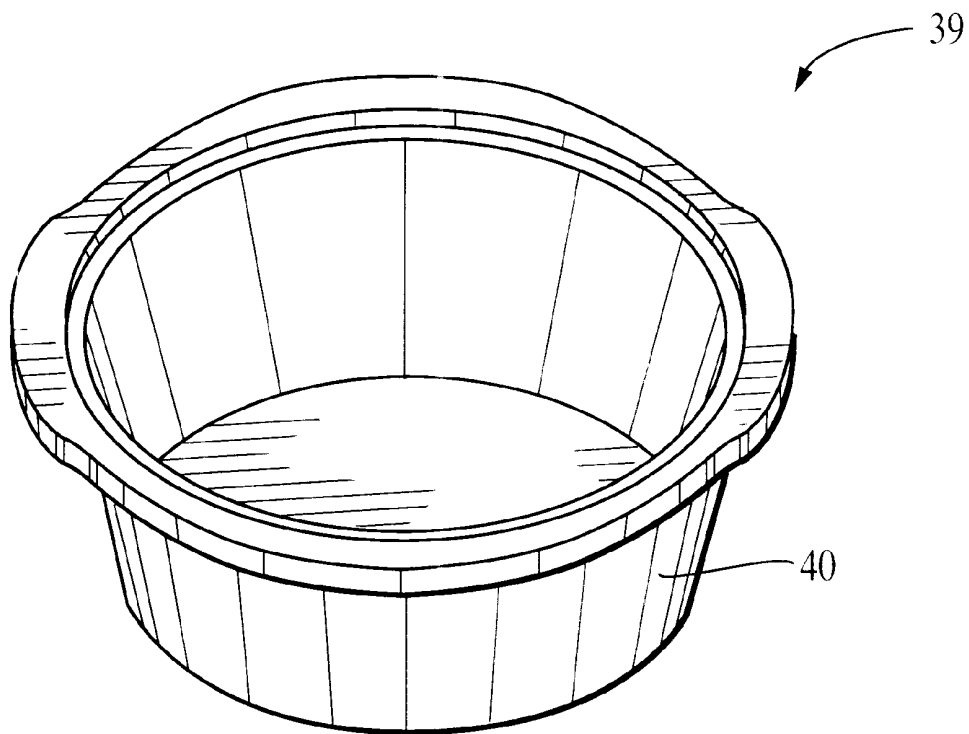


FIG. 3
PRIOR ART

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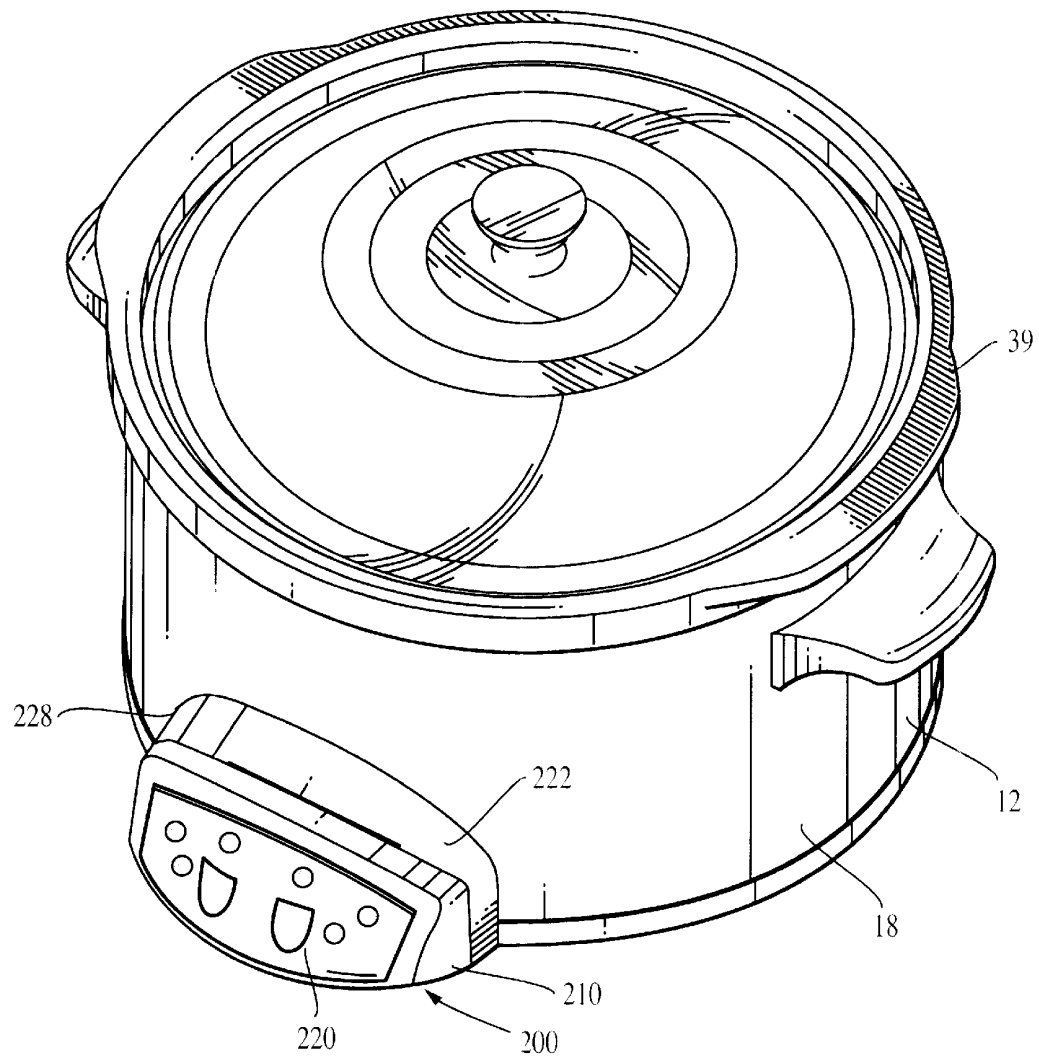


FIG. 4

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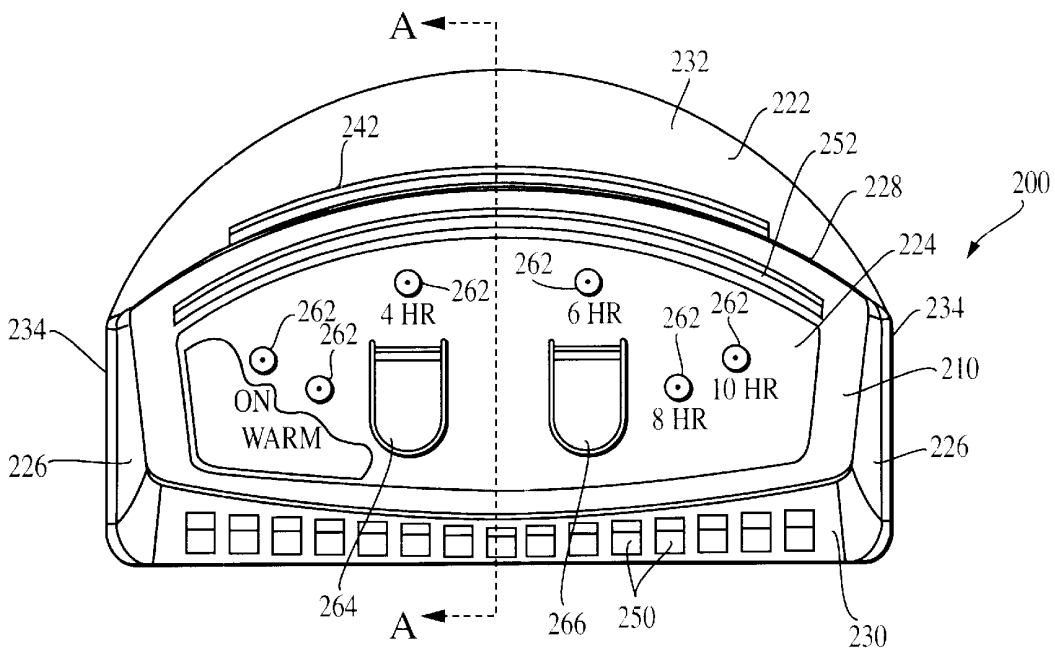


FIG. 5

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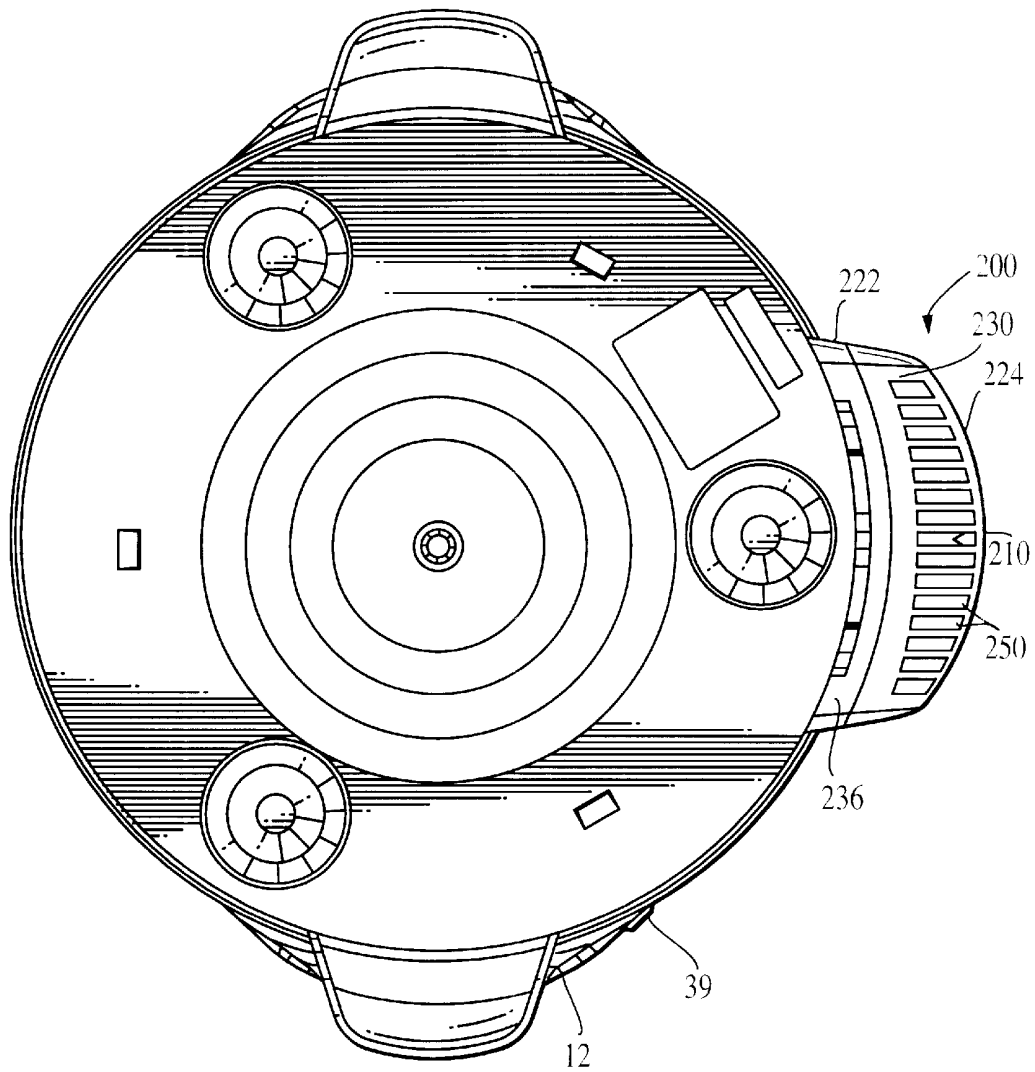


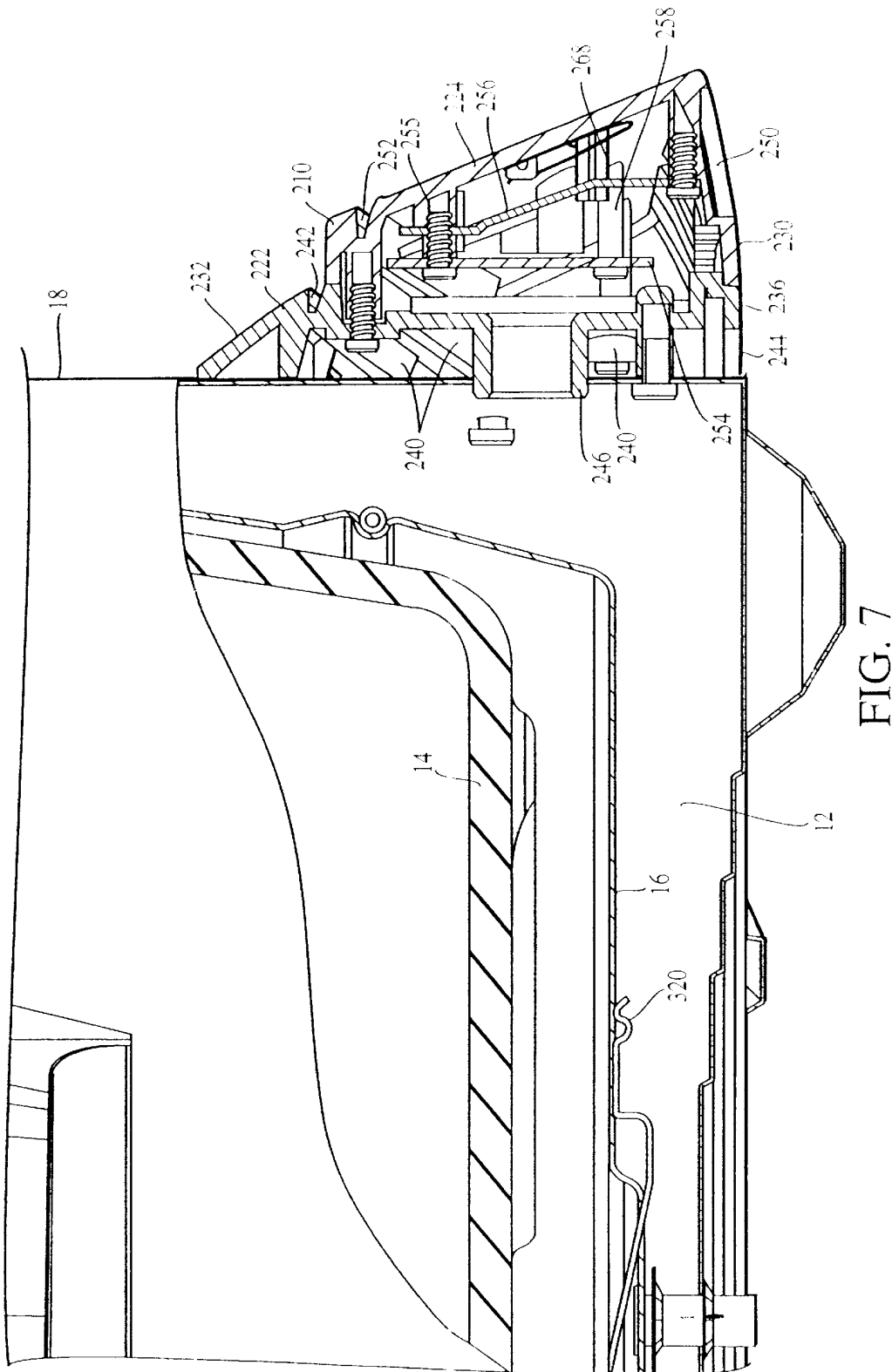
FIG. 6

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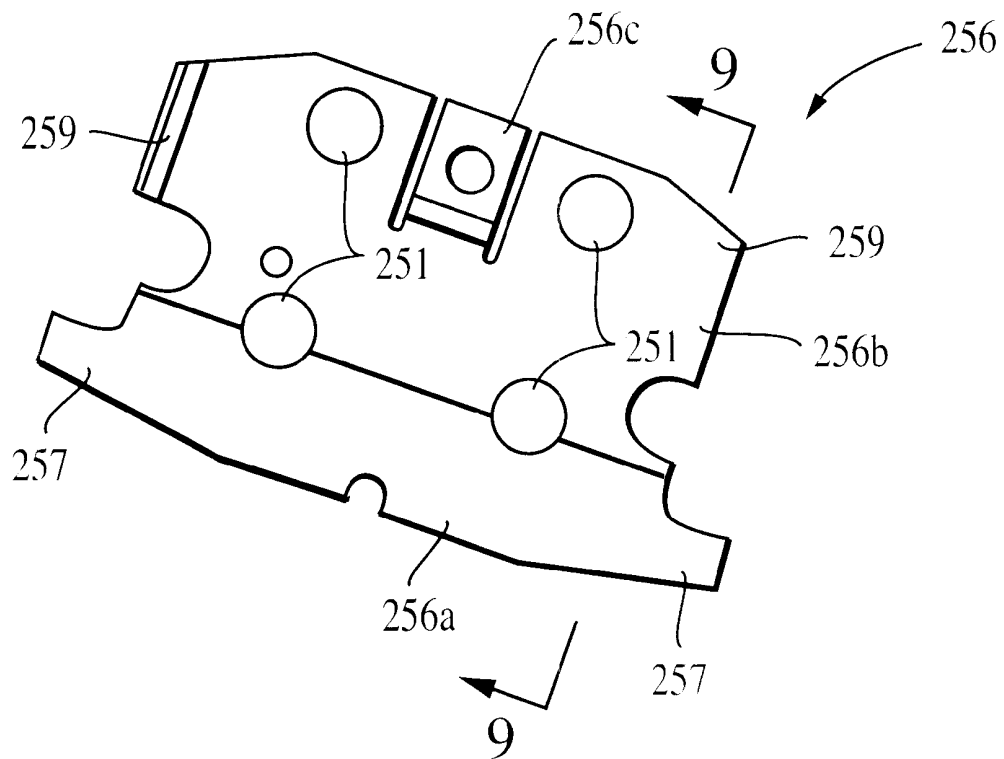


FIG. 8

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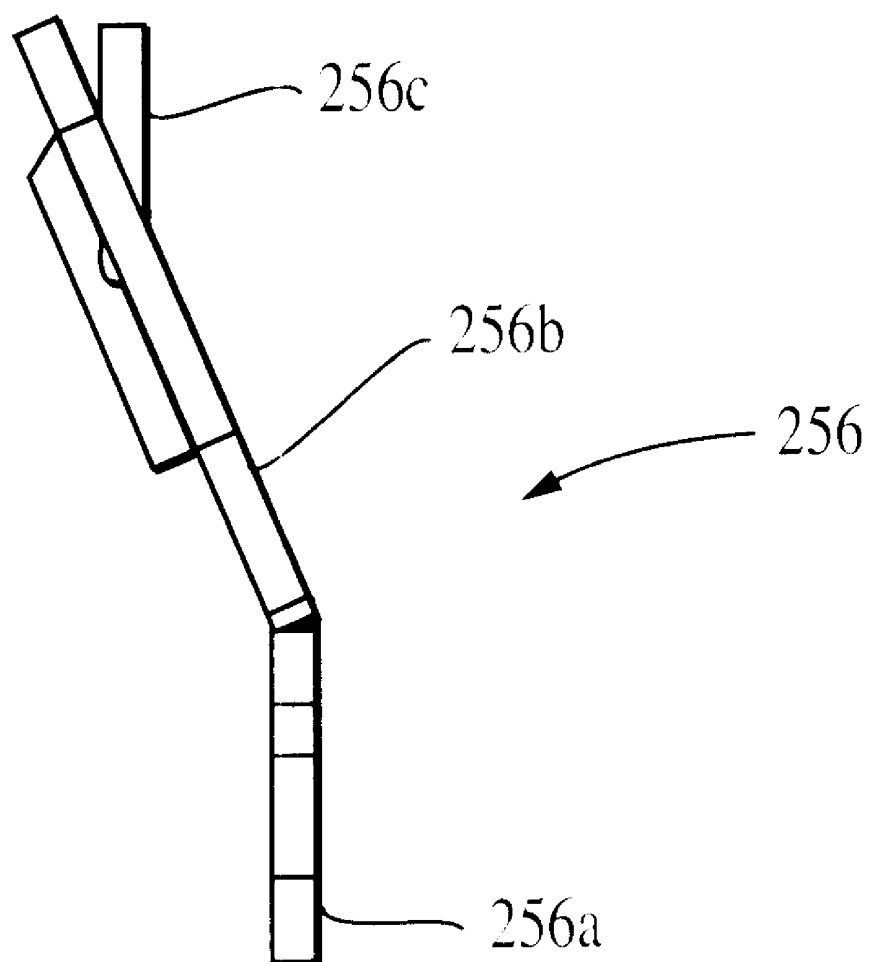


FIG. 9

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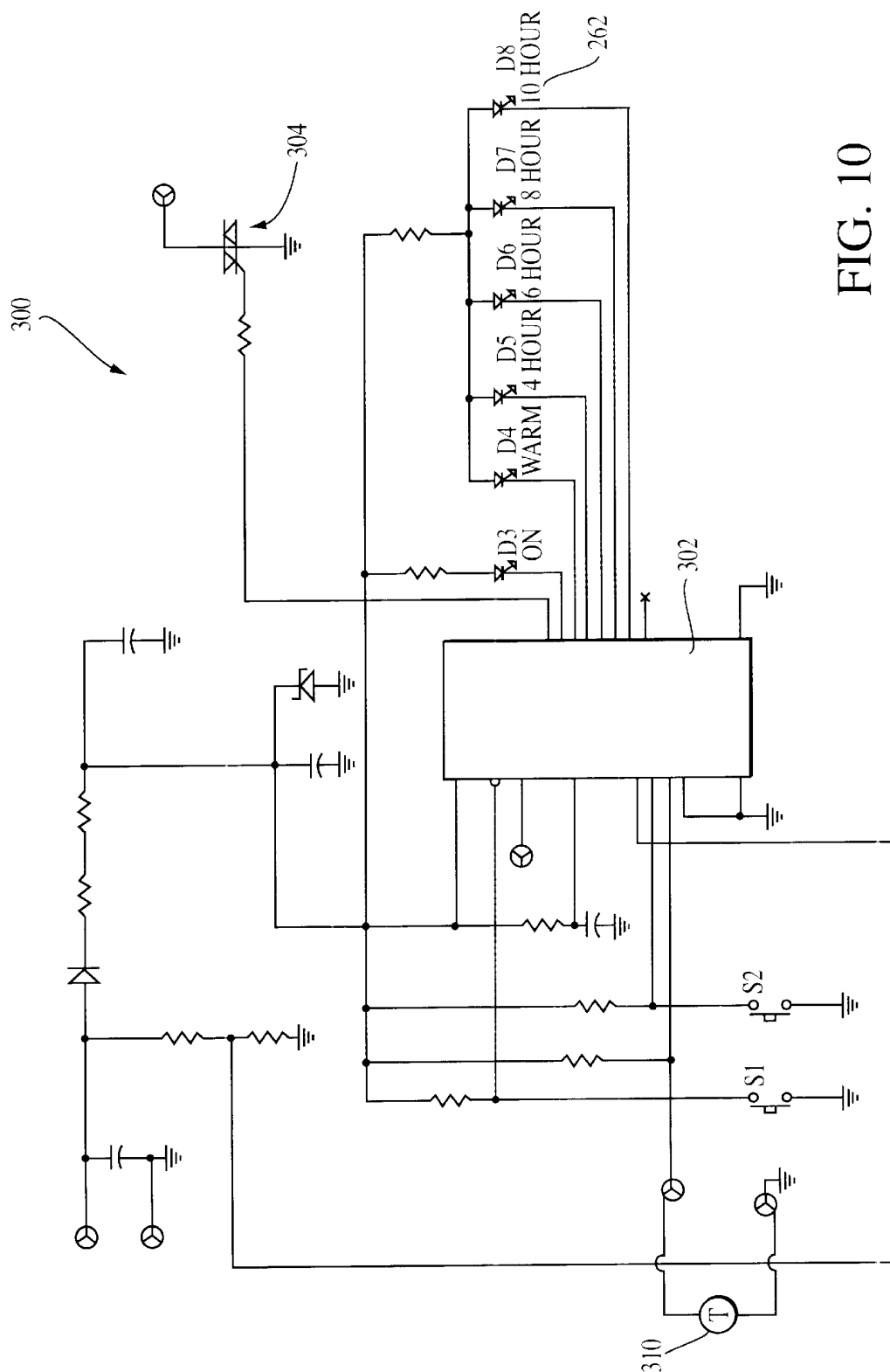
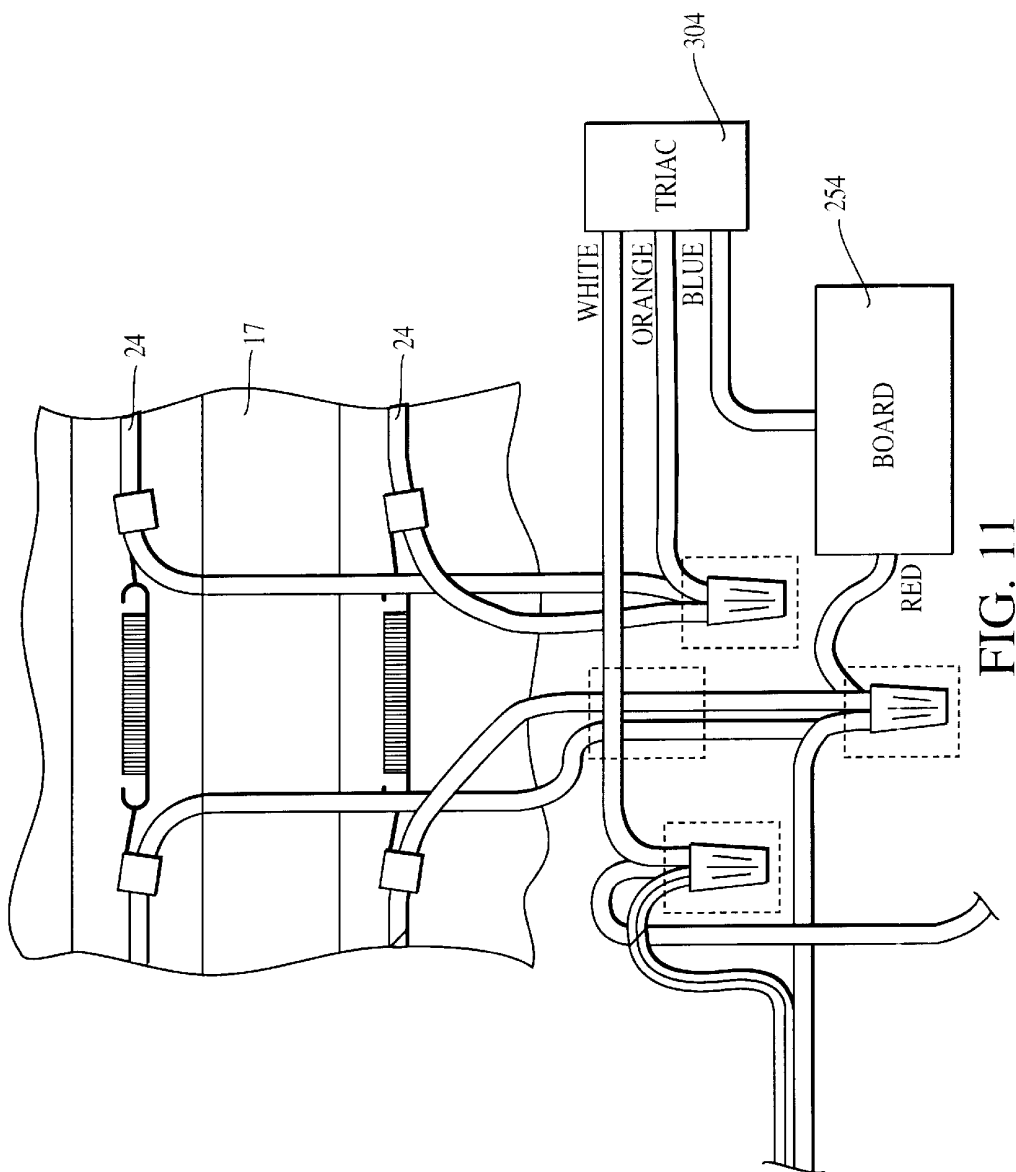


FIG. 10



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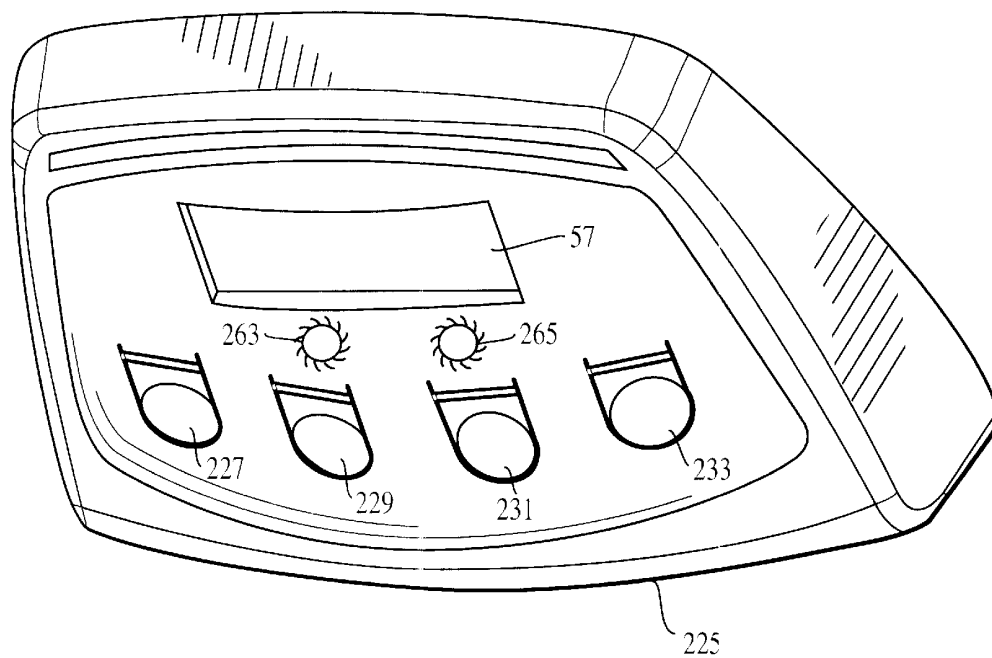


FIG. 12

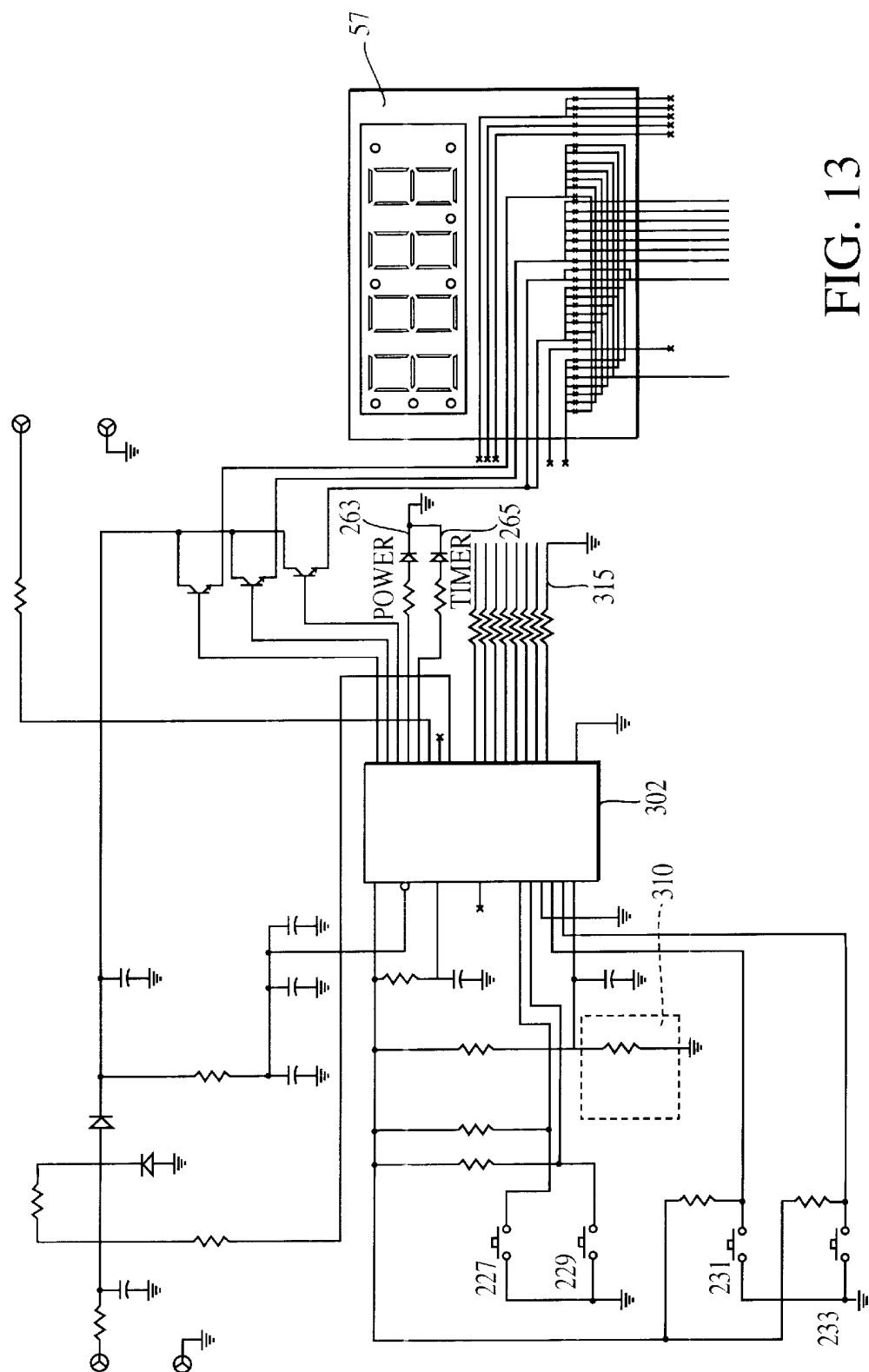


FIG. 13

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PROGRAMMABLE SLOW-COOKER APPLIANCE

This application claims priority to Provisional Application No. 60/189,443, filed Mar. 15, 2000, and to Provisional Application No. 60/196,273, filed Apr. 5, 2000.

BACKGROUND OF THE INVENTION

Time and convenience are in short supply for homemakers wishing to supply a home-cooked meal to family members. Some appliances, such as slow-cooker appliances, attempt to meet this need by providing all-day cooking while a homemaker is absent. Such appliances, however, tend to be of the type where only one temperature and all day cooking is possible, regardless of the food item, and thus potentially subjecting the food item to over- or under-cooking. Another option may be to use a cooking unit with a controller, where a user may set a time or temperature desired. These units, however, tend to be quite a bit larger and more expensive than slow-cooker appliances. If these units are of more reasonable size, they also suffer because the controller inevitably must be placed near the heating element.

What is needed is a cooking appliance in which the user retains control over the time and temperature of cooking, but which is small enough to be convenient. What is needed is a slow-cooker unit in which the controller does not become overheated and damaged by the heating element.

SUMMARY OF THE INVENTION

One embodiment of the invention is a programmable slow-cooker appliance, including a heating unit, which includes upstanding sidewalls and a bottom wall. The sidewalls and bottom encompass a heating area. The appliance includes a heating element mounted on the inner surface of the interior wall of the heating unit. In one embodiment, the cooking area may also encompass a cooking unit inside the heating unit, suitable for holding food to be cooked. The appliance includes a programmable controller mounted on its outside, and preferably mounted via a controller housing, which acts to insulate the controller from the heat of the appliance, preferably via a unique system of a heat sink and ventilation. The housing, on the side of the slow-cooker appliance, utilizes ventilation holes on its bottom and top to encourage a chimney effect, in which cool air from the surroundings is drawn into ventilation slots or holes at the bottom of the housing. This air cools the controller, and the air is then expelled from ventilation holes on the top of the housing, convecting heat away from the controller.

Another aspect of the invention is a method of using the programmable controller to ensure that food is cooked according to the desires of a user. The user provides a food item and places the food item into the slow-cooker appliance, as described above. The user sets a cooking time and temperature for the programmable slow-cooker unit, using the controls to set both the time and the temperature. The cooking time according to one embodiment may not be set less than four hours, and the temperature may not be set for less than 150 degrees Fahrenheit (66 degrees Celsius). This prevents a user from accidentally setting the cooker to a "warm" temperature, in which food would only be warmed but not cooked thoroughly before consumption. In one embodiment, if the user sets no time or temperature, but merely turns the cooker on, the cooker defaults to a particular time and temperature, set by the user or the factory, such as a default setting of four hours and 175 degrees Fahrenheit or eight hours and 150 degrees Fahrenheit.

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BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of an embodiment of a prior art slow-cooker appliance having an oval shape that may be utilized in the present invention;

FIG. 2 is a perspective view of a prior art embodiment of a cooking unit 14 which may be utilized with the appliance of FIG. 1;

FIG. 3 is a perspective view of a prior art cooking unit 39 similar to that shown in FIG. 2, but having a circular shape;

FIG. 4 is a perspective view of a slow cooker appliance incorporating the present invention;

FIG. 5 is a detailed plan view of a portion of the control 200 of the embodiment of FIG. 4;

FIG. 6 is a bottom plan view of the embodiment of FIG. 4;

FIG. 7 is a side cutaway view of the embodiment of FIG. 4;

FIG. 8 is a plan view of a heat sink 256 as utilized in the embodiment of FIG. 4;

FIG. 9 is a side view taken along a line 9—9 of FIG. 8;

FIGS. 10 and 13 are schematic circuit diagrams showing the circuitry and components implemented in preferred embodiments;

FIG. 11 is a wiring diagram showing some of the electric componentry of the preferred embodiment; and

FIG. 12 is an embodiment of the front panel.

DETAILED DESCRIPTION OF THE DRAWINGS AND PREFERRED EMBODIMENTS

Referring to FIG. 1, one prior art embodiment of a food-heating slow-cooker appliance 10 is shown. The appliance 10 preferably comprises a heating unit 12 and a cooking unit 14. An exemplary slow cooker appliance 10 may be a Crock-Pot® Slow Cooker made by The Rival Division of The Holmes Group® of Milford, Mass. The heating unit 12 preferably has a bottom 16 and a continuous outer sidewall 18. The bottom 16 and an interior sidewall 17 define a well-like heating chamber 20 having an oval cross-section, and the interior sidewall 17 defines an annular lip 22 at an upper edge of the outer sidewall 18 and the interior sidewall 17. The heating chamber 20 has a heating element 24 disposed therein and mounted to the heating unit 12, either under the bottom 16 or additionally between the outer sidewall 18 and the interior sidewall 17. A control switch 26 is conventionally used to provide electricity to the heating element 24. The heating element 24 functions to heat the cooking unit 14 via the heating chamber 20.

As shown in FIG. 2, the cooking unit 14 has a bottom 28 with preferably a continuous sidewall 30 upstanding therefrom. The continuous sidewall 30 preferably has an annular lip 38 projecting in flange-like fashion from the upper end thereof and a substantially oval cross-section. The cooking unit 14 is adapted to be at least partially received within the heating unit 12 with the annular lip 38 of the cooking unit 14 preferably engaging the annular lip 22 of the heating unit 12, supporting the cooking unit 14 within the heating unit 12. Preferably, the annular lip 38 further defines a pair of handle portions 38(a) and 38(b) to facilitate lifting the cooking unit 14. The cooking unit 14 is preferably made of ceramic with a coating of conventional glazing compound.

The thermal and heat retaining properties of the ceramic cooking unit 14 allow it to conduct heat from the heating chamber 20 through the sidewall 30. This provides even heating throughout the unit 14.

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As shown in FIG. 3, an alternative embodiment of the appliance 10 includes a cooking unit 39 having a sidewall 40 and a substantially circular cross-section. This embodiment is preferably adapted to fit within a heating unit having a complementary circular heating chamber. This cooking unit 39 is used in an embodiment of the present invention shown in FIG. 4.

In use, the heating unit 12 is provided with a first cooking unit 39. The heating element 24 (not shown) may be powered on and off as necessary to supply heat at a maintained temperature to the cooking unit 39 and the heating chamber via a programmable control 200. The control 200 preferably includes a circuit board housing 210, a control panel 220, and an insulation shield 222 assembled together for attachment to the outer sidewall 18 of the heating unit 12. The interior of the housing 210 contains a printed circuit board 254 (shown in FIG. 7) containing electronic components of the control.

As shown in FIGS. 5 and 6, the housing 210 preferably includes a control panel user interface 224 located on an inclined front surface of the housing 210. Preferably, the housing 210 and insulation shield 222 are made from a thermoplastic material such as polypropylene. A pair of side walls 226, a top wall 228, and bottom wall 230 are preferably located adjacent the control panel 224 and support the control panel 224 in an inclined position away from the front of the cooking appliance 10. This gives the user access to the control panel 224, and also locates the controls and componentry within the housing 210 away from a significant amount of the heat generated by the appliance 10. The printed circuit board 254 may be mounted via threaded screws 255 to rearwardly projecting screw receiving portions 258 on the rear side of the housing 210.

The control panel 224 includes a plurality of indicator lights, such as LEDs 262, spaced on the front panel 224. As is well-known in the art, a variety of other indicator devices may be provided, including digital readouts, audible alarms, liquid crystal displays, incandescent lamps or fluorescent readouts. Preferably, the control panel 224 also includes a plurality of cantilevered portions 264 and 266 as shown in FIG. 5. The cantilevered portions 264, 266 preferably include rearwardly projecting fingers 268 (shown in FIG. 7) which translate the depression of the portions 264, 266 toward the rear portion of the housing 210. The fingers 268 are preferably used to depress pushbutton switch portions located on the circuit board 254. A water-impermeable label membrane may be applied over the front of the control panel 224 to label the indicators 262 and cantilevered portions 264 and 266 for the user. The membrane may also protect the front control panel 224 from damage from spilled foods or liquids and facilitate cleaning.

To further protect the electronic componentry within the housing 210 from the heat generated by the appliance 10, the annular shield member 222 is preferably sized for interposition between the heating unit 12 and the housing 210. In particular, as shown in FIGS. 5 and 6, the shield 222 includes a top wall 232, a pair of side walls 234, and a bottom wall 236. The shield 222 acts as a ventilated spacer to hold the electronic components and the housing 210 at a distance away from sidewall of the cooking unit 12.

In order to dissipate heat that may otherwise be retained between the cooking unit 12 and the rear of the housing 210, an air circulation space is provided within the shield. In particular, as shown in the side cutaway view of FIG. 7, the air space 240 behind the shield 222 may vent warmer air out through an upper elongated slot 242 defined within the top

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wall 232 of the shield 222. Likewise, an elongated slot 244 is defined into the air space 240 in the bottom wall 236 of the shield 222. Heated air may thus escape through the top elongated slot 242 and cooler air may enter the air space 240 through the bottom elongated slot 244. As shown in FIG. 7, the shield 222 also preferably defines a rearwardly projecting cylindrical flange 246 that extends into the outer wall 18 to allow passage of control and power wiring between the interior of the heating unit 12 and the interior of the housing 210.

In a similar fashion, air circulation is promoted through the housing 210 through a set of openings, preferably defined between the upper portion and the bottom of the housing 210. In particular, a plurality of openings 250 are defined within the bottom wall 230 of the housing 210. An elongated upper slot 252 is provided on the front face 224 of the housing 210. This allows air to freely circulate behind the control panel 224 and assist in the dissipation of heat from the circuit board 254 and its electronic componentry within the housing 210. Preferably, a heat sink 256 is provided as shown in FIG. 7 and positioned between the circuit board 254 and the front panel 224 inside the housing 210. The sink 256 preferably includes a plurality of openings defined therein to allow air to circulate between the openings 250 and 252 and through and around the heat sink 256 to dissipate additional heat therefrom. Also shown is the relative position of cooking unit 14.

FIGS. 8 and 9 show a detailed view of the heat sink 256. Preferably, the heat sink is machined from 0.063 inch thick 3003-0 anodized aluminum. The heat sink 256 is preferably bent at a 160 degree angle between a bottom flange portion 256a and an upper portion 256b. A centrally located retaining tab portion 256c is bent parallel with the lower portion 256a, and the portions 256a and 256c are used for attachment of the heat sink 256 to the rear side of the housing 210 interior via the rearwardly projecting screw receiving portions 258. To maximize the dissipation of heat, a plurality of winged sections 257 and 259 are provided on the heat sink 256 and extend outwardly from a center portion 256a of the heat sink 256. A plurality of openings are defined through the heat sink 256 to allow the fingers 258 of the control panel cantilevered portions 264, 266 to project through the heat sink and contact the circuit board 254 at the rear of the housing 210. The openings 251 also facilitate cooling air flow through and past the heat sink 256 to further dissipate heat therefrom.

The circuit board 254 mounts circuitry and logic allowing the user of the appliance 10 to electronically control and program cooking cycles and temperature. A schematic diagram of the electronic circuitry and components is shown in FIG. 10. The diagram shows a preferred exemplary circuit incorporating preferred components as utilized in the preferred embodiment of the present invention. One skilled in the art will recognize that the componentry illustrated herein is exemplary only and that many other components may be substituted to achieve the functions described herein. FIG. 10 includes labels for each of the components of the circuit, and only major components will be described herein.

First, as shown in the diagram, the preferred circuit 300 is preferably built around an EPROM/ROM-based CMOS microprocessor controller 302, such as the PIC16CR54C RISC CPU manufactured by Microchip Technology, Inc. The chip output preferably includes circuited drivers for 6 LED indicators 262 (labeled D3-D8) as shown. These LED indicators may be assigned labels as follows:

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LED	Indicates
D3	On
D4	WARM
D5	4 HOUR
D6	6 HOUR
D7	8 HOUR
D8	10 HOUR

Two momentary pushbutton contact switches **S1** and **S2** are used to trigger the "Off" and "Cook" features, respectively, as will be described in the cooking procedure below. Of course, other indicators and switches may be substituted. Note that while examples are given, the circuitry may be implemented in numerous ways, as is well-known in the art, to accomplish the varying programming modes described below.

The temperature of the cooking appliance is measured using a thermistor **310**, which is connected externally of the circuit board to the underside of the bottom of the heating chamber. A retention clip **320**, shown in FIG. 7, is utilized to hold the thermistor in thermal contact with the bottom **16**. In a preferred embodiment, the appliance uses a model USX1732 thermistor manufactured by U.S. Sensor, Inc.

Triac **304**, which is preferably a logic Triac Model L4008L6-ND manufactured by Digi-Key, Inc., is utilized to switch the power supplied to the heating elements of the appliance. Preferably, the Triac is of an isolated tab type and includes a heat sink tab that is fastenable to the heat sink **256** shown in FIGS. 8 and 9. Preferably, the Triac is mounted separately to one of the mounting holes on the center portion **256a** of the heat sink **256** so that the tab is in thermal contact with the heat sink **256** to dissipate heat generated from its current controlling function. Most of the other components of the circuit **300** are mounted on a conventional printed circuit board **254**.

FIG. 11 shows the wiring of the external Triac **304** in relation to the circuit board **254** and heating elements **24**. As shown in the Figure, the heating elements **24** are in thermal contact with and wrapping around the interior sidewall **17** of the heating unit.

The operation of the appliance **10** is as follows. The programmable circuitry **300** allows the user to set both the temperature and desired time for cooking. The functions of the switches **S1** and **S2**, which are activatable via the cantilevered portions **264** and **266** of the control panel **224**, are as follows:

S1. OFF pushbutton—turns the appliance **10** off.

S2. COOK pushbutton—subsequent pushes of the button cycle through 4 hour, 6 hour, 8 hour and 10 hour cook times.

When the unit is plugged in, the power "on" indicator flashes. The user then pushes the COOK button (switch **S2**) to set the temperature and cooking time. As the user pushes the COOK switch **S2**, the LED's **D5–D8** illuminate to indicate the corresponding time setting as follows.

LEDs

D3. POWER—on when appliance **10** is in cook or warm modes.

D5. 4 HOUR—on when appliance is in 4-hour cook mode

D6. 6 HOUR—on when appliance is in 6-hour cook mode

D7. 8 HOUR—on when appliance is in 8-hour cook mode

D8. 10 HOUR—on when appliance is in 10-hour cook mode

D4. WARM—on when appliance is in half-power mode. Thus, subsequent pushes of the COOK switch **S2** activate different cooking modes, as shown by the 6 HOUR, 8 HOUR and 10 HOUR LEDs **262** on the control panel **224**.

If the COOK switch **S2** is pressed in the 10 HOUR mode, the control **200** recycles to the 4 HOUR cooking mode, and its indicator.

In general, full power will be applied to the heating element **24** until the time corresponding to the illuminated LED elapses, after which the power to the heating element **24** is reduced by half, the WARM indicator illuminates and all cook time indicators extinguish. The choices of operation are: 4 or 6 hours on a HI temperature, and 8 to 10 hours on a lower temperature setting. Once the user selects the desired setting, the appliance **10** starts the cooking operation. Once the time setting has expired, the appliance **10** automatically reduces power to the heating element **24** to put the unit in a WARM setting. The unit will stay in the WARM setting until the user pushes the OFF button or unplugs the unit. Of course, other programming schemes are possible.

Preferably, the user cannot set the unit initially in the WARM setting. The system will only go to WARM after one of the time functions has expired. This avoids possible food safety problems that may be associated with cooking food only on the WARM setting. Pressing the OFF switch **S1** any time the unit is on preferably removes power from the heating element **24** and extinguishes all indicator LEDs **262**.

In another embodiment, the slow-cooker appliance utilizes four push-button switches, rather than two, to set times and temperatures for cooking. An exemplary control panel is depicted in FIG. 12, with control circuitry in FIG. 13. Four momentary pushbutton contact switches **227**, **229**, **231**, **233** are used to trigger various power and setting functions as will be described in the cooking procedure below. Of course, other numbers or types of indicators and switches may be substituted as well. FIG. 13 shows circuitry applicable to such an embodiment, incorporating controller **302**, external temperature element **310**, digital readout **57**, and Power LED **263** and Timer LED **265**. The Power LED indicates power is present at the microprocessor controller and the Timer LED indicates that the Timer function is on and working.

The operation of the appliance is as follows. The programmable circuitry allows the user to set both the temperature and the desired cooking time. The functions of the switches **227**, **229**, **231**, **233** on an alternative embodiment of a control panel user interface **225**, are as follows:

227. ON/OFF power pushbutton—turns the appliance on and off.

229. TIMER pushbutton—activates stepped timer.

231. UP pushbutton—increases displayed numerical value.

233. DOWN pushbutton—decreases displayed numerical value.

When the unit is plugged in, the unit defaults to 150-degrees F. as shown on the digital display **57**. The user may adjust the desired cooking temperature in 25-degree increments using the UP **231** button or the DOWN button **233**, with 150 degrees Fahrenheit as a minimum temperature. Once the user has selected the specific temperature, the appliance will start the cooking process.

The user may also select the TIMER mode by pressing the TIMER button **229**. In TIMER mode, the controller defaults to 4 hours. The user can use the UP or DOWN controls to increase or decrease the time in 15-minute increments. Once the time is set, the controller **302** will count down the time remaining for cooking in 1 minute increments until the unit

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"times out". At that time, the power is shut off from the heating element.

In all modes, the temperature is read periodically by the thermistor or other temperature element and relayed to the controller. The reading is checked at 4-second intervals. If the temperature is above or equal to the set point, power is removed. If it is below the set point, power is applied to the heating element 32. Of course, the circuitry can be modified as desired to achieve various program methods and modes.

Another embodiment of the slow cooker appliance adds a piezobuzzer to the circuitry. A piezobuzzer is simply an electrically-activated buzzer that can be programmed to emit a sound at desired moments. In one embodiment, a piezobuzzer may be installed as an output 315, controlled by the microprocessor controller 302, as shown in FIG. 13, and programmed to emit a sound when desired. In one embodiment, the buzzer may beep to provide feedback to a user when a pushbutton is pushed. The slow cooker may also be programmed to emit a sound to indicate the end of the cooking time. The buzzer may also be used to emit sounds at other desired times.

It is intended that the foregoing description illustrates rather than limits this invention, and that it is the following claims, including all equivalents, which define this invention. Of course, it should be understood that a wide range of changes and modifications may be made to the embodiments described above. Accordingly, it is the intention of the applicants to protect all variations and modifications within the valid scope of the present invention. It is intended that the invention be defined by the following claims, including all equivalents.

What is claimed is:

1. A programmable slow-cooker appliance, comprising:
 - a heating unit;
 - a cooking unit adapted to fit at least partially within the heating unit;
 - a controller housing fixedly mounted to an outside of the heating unit; and
 - a programmable controller mounted to the housing to control the heating unit, wherein said housing is configured to convect heat away from the controller.
2. The slow-cooker appliance of claim 1, wherein the housing is an enclosure for at least a portion of the controller.
3. The slow-cooker appliance of claim 2, wherein the controller housing insulates the controller from the heating unit.
4. The slow-cooker appliance of claim 3, wherein the housing further comprises a heat shield, and the heat shield is made from a material selected from at least one of thermoplastics and insulating materials.
5. The slow-cooker appliance of claim 4, wherein the housing defines ventilation openings configured to allow air to flow into and out of said housing.

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6. The slow-cooker appliance of claim 5, wherein the housing includes at least a pair of slots defined in an upper and lower part of the housing to define airflow thru the slots and behind the controller.

7. The slow-cooker appliance of claim 1, wherein the controller further comprises control elements and a display.

8. The slow-cooker appliance of claim 7, wherein the control elements are selected from the group consisting of a control panel, push-buttons, switches, and a digital readout.

9. The slow-cooker appliance of claim 1, further comprising a temperature measuring device in communication with said controller.

10. The slow-cooker appliance of claim 1, further comprising a piezobuzzer.

11. A control housing for a slow cooker heating unit, said housing comprising:

- a front wall;
- a bottom wall defining at least one lower opening, the bottom wall attached to the front wall;
- a top wall defining at least one upper opening, the top wall attached to the front wall; and
- a circuit board mounted behind the front wall, the circuit board apart from a wall of the heating unit.

12. The control housing of claim 11, further comprising a heat sink between the circuit board and the front wall.

13. A method of using a programmable slow-cooker appliance, the method comprising:

- providing a food item;
- placing the food item into a cooking unit of the slow-cooker appliance;
- selecting a cooking temperature and time using a programmable controller mounted to a housing fixedly mounted to a heating unit; and
- changing the heating unit temperature automatically to a lower temperature after the selected time.

14. The method of claim 13, further comprising notifying a user with illuminated indicators that the slow-cooker appliance is powered and that the timer is active.

15. The method of claim 13, wherein the temperature is set by default upon selection of a cooking time.

16. The method of claim 13, wherein the time is selected from the group consisting of 4 hours, 6 hours, 8 hours and 10 hours and the temperature is selected from the group consisting of high and low.

17. The method of claim 13, wherein the temperature and time are set in increments.

18. The method of claim 13, further comprising cooling the electronic circuitry of the programmable controller via a chimney effect.

19. The method of claim 13, further comprising emitting a sound.

* * * * *

EXHIBIT B

(12) **United States Patent**
DeCobert et al.

(10) **Patent No.:** **US 6,740,855 B1**
(45) **Date of Patent:** ***May 25, 2004**

(54) **PROGRAMMABLE SLOW-COOKER APPLIANCE**

(75) Inventors: **James E. DeCobert**, Attleboro, MA (US); **Lorens G. Hlava**, Clinton, MO (US); **Charles T. Thrasher, Jr.**, Clinton, MA (US)

(73) Assignee: **The Holmes Group, Inc.**, Milford, MA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

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(21) Appl. No.: **10/386,276**

(22) Filed: **Mar. 11, 2003**

Related U.S. Application Data

(63) Continuation of application No. 09/802,174, filed on Mar. 8, 2001, now Pat. No. 6,573,483.

(60) Provisional application No. 60/196,273, filed on Apr. 5, 2000, and provisional application No. 60/189,443, filed on Mar. 15, 2000.

(51) **Int. Cl.⁷** **H05B 1/02**

(52) **U.S. Cl.** **219/506; 219/429; 219/435; 219/436; 219/494; 99/340**

(58) **Field of Search** **219/506, 494, 219/497, 501, 505, 430-439, 429; 99/340**

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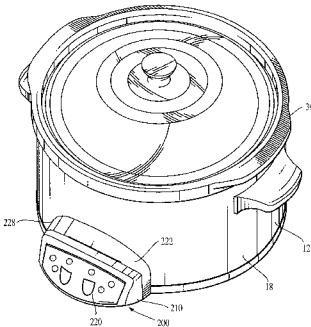
(57) **ABSTRACT**

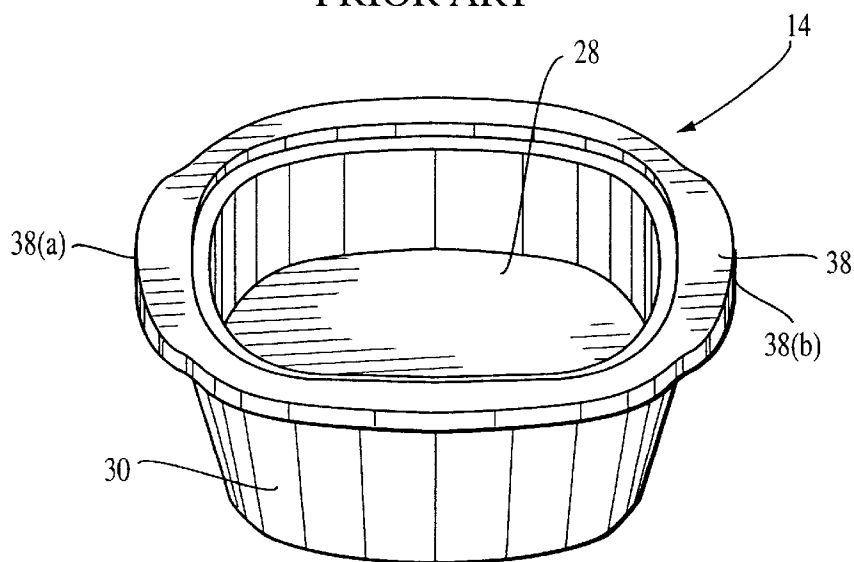
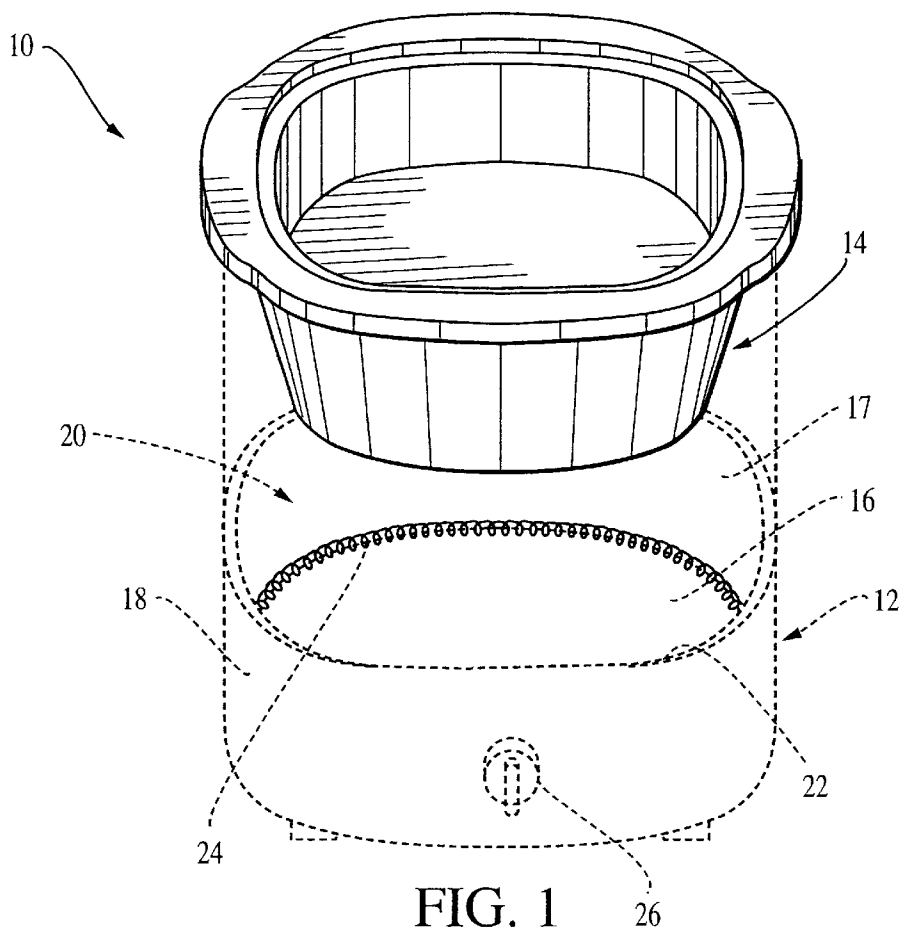
A programmable slow-cooker appliance, in which a user sets a time and temperature for cooking a food item. A programmable controller prevents the unit from being used solely as a “keep warm” appliance, and a unique design allows cooling of the controller during cooking.

42 Claims, 12 Drawing Sheets

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U.S. Patent

May 25, 2004

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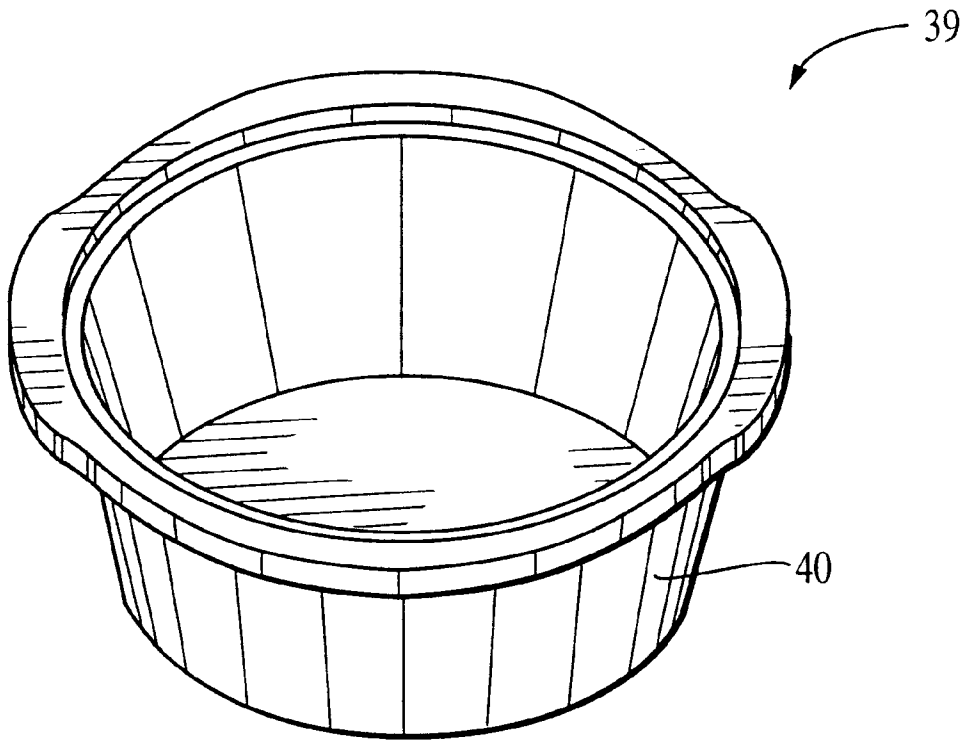


FIG. 3
PRIOR ART

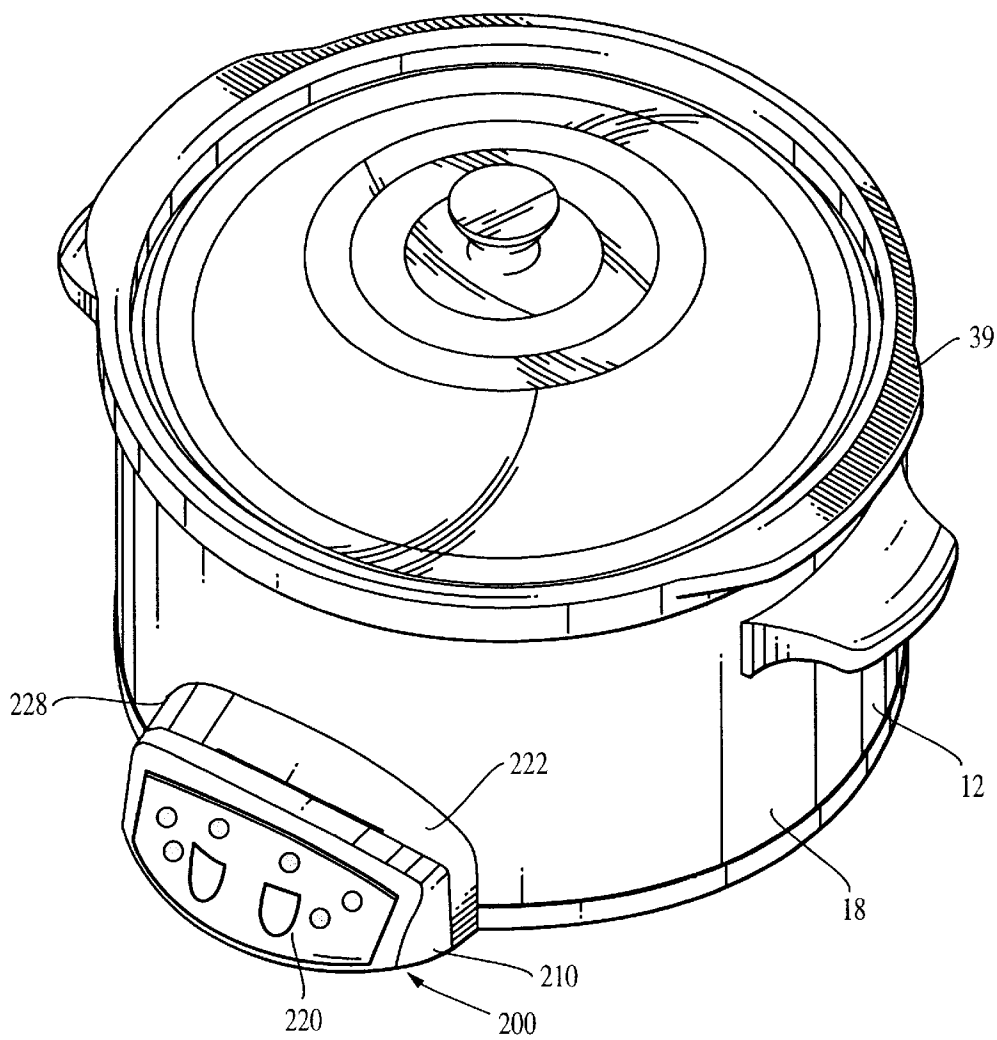


FIG. 4

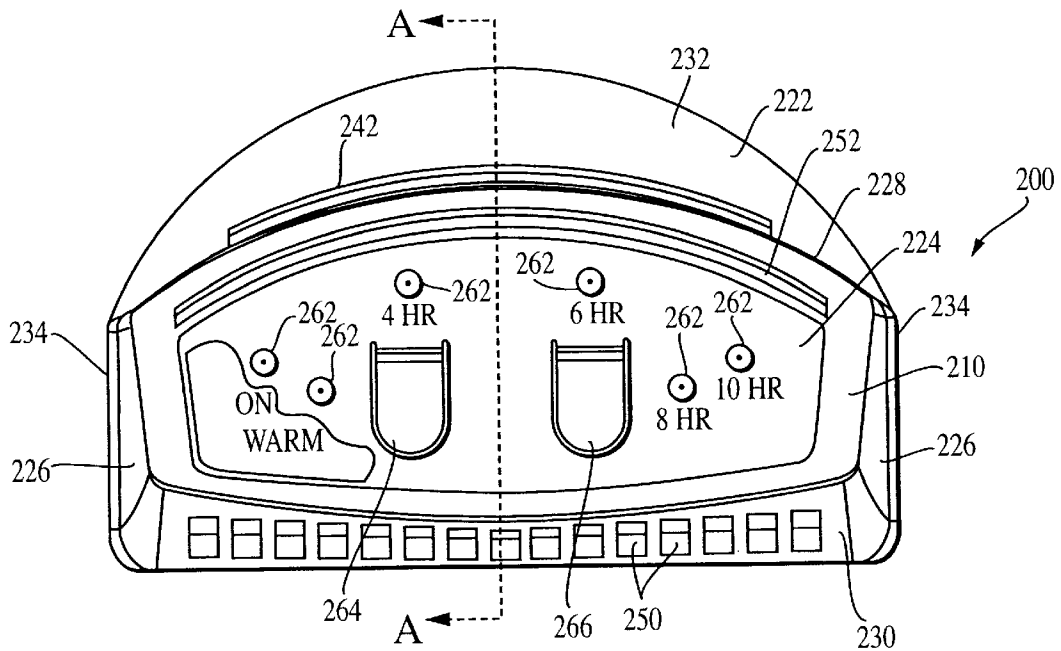


FIG. 5

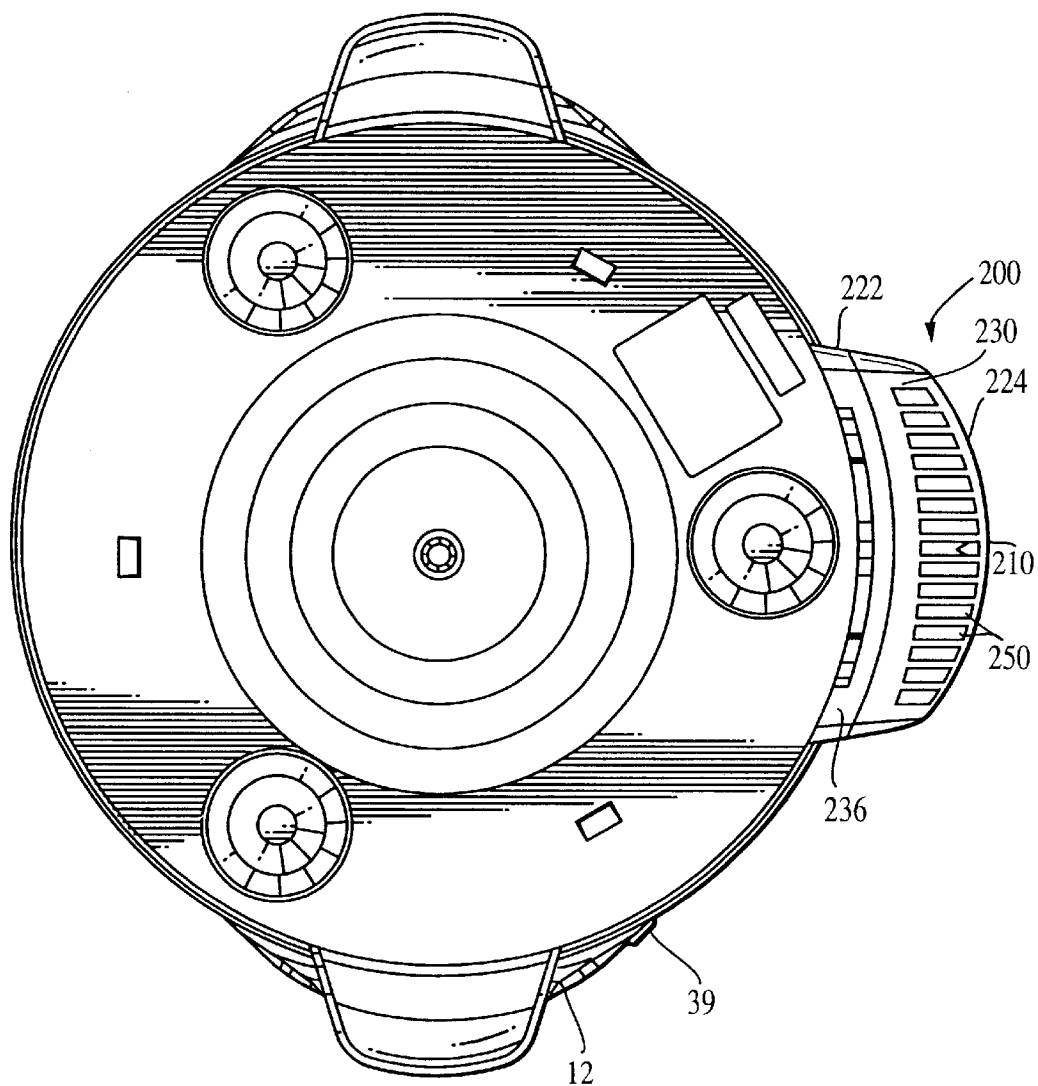


FIG. 6

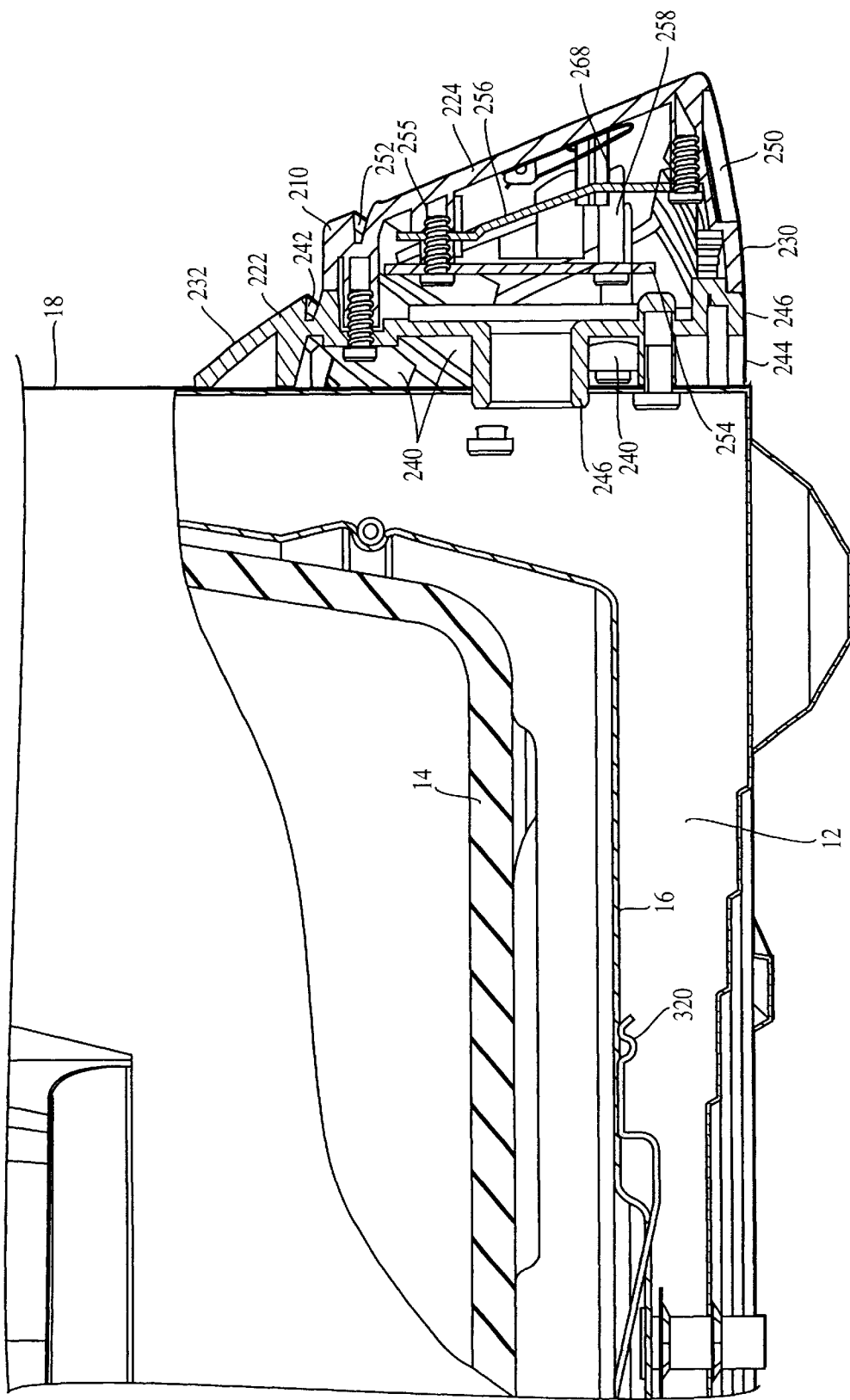


FIG. 7

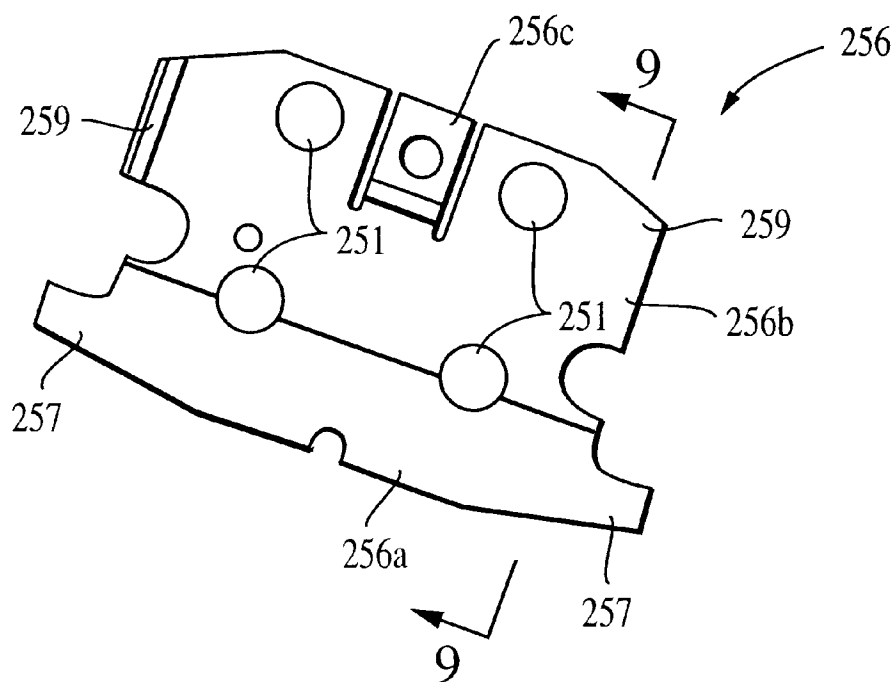


FIG. 8

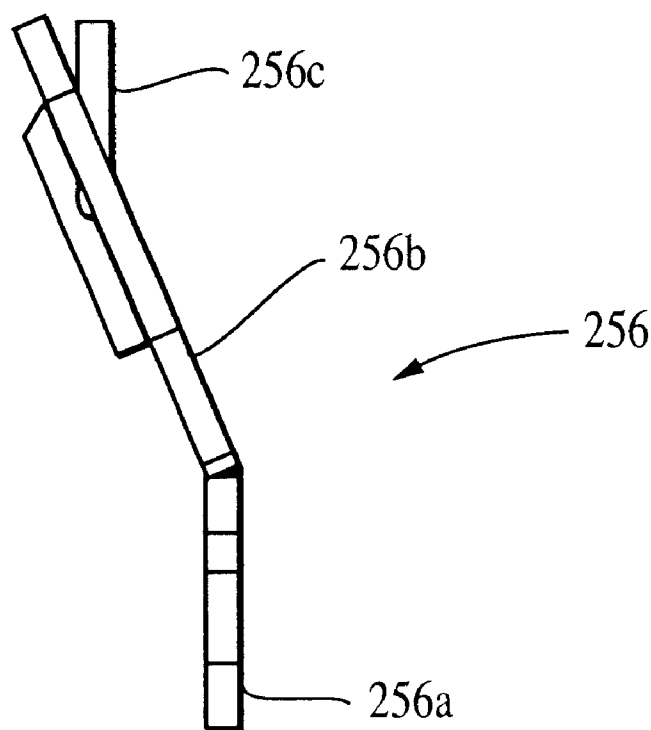


FIG. 9

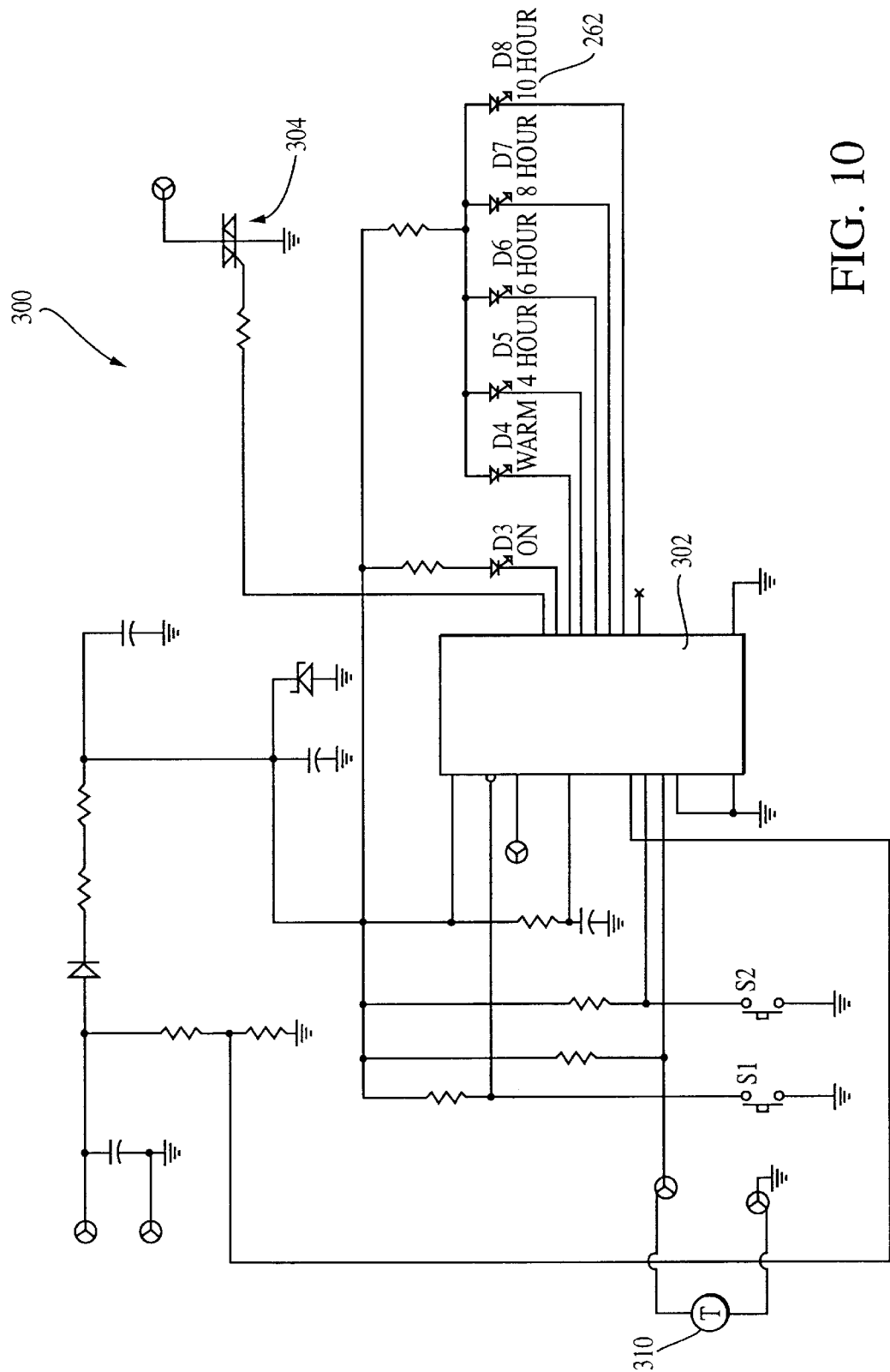
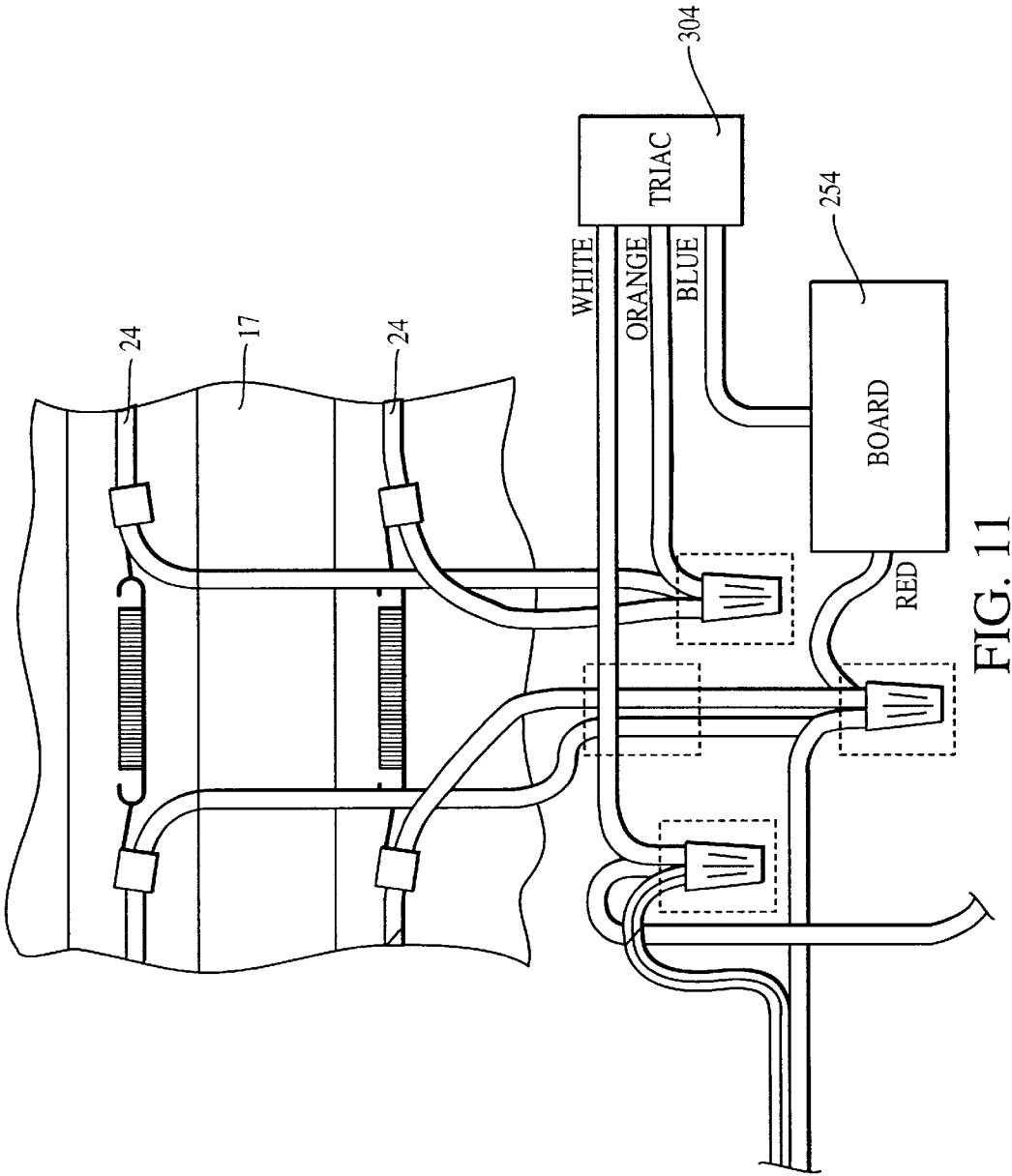


FIG. 10



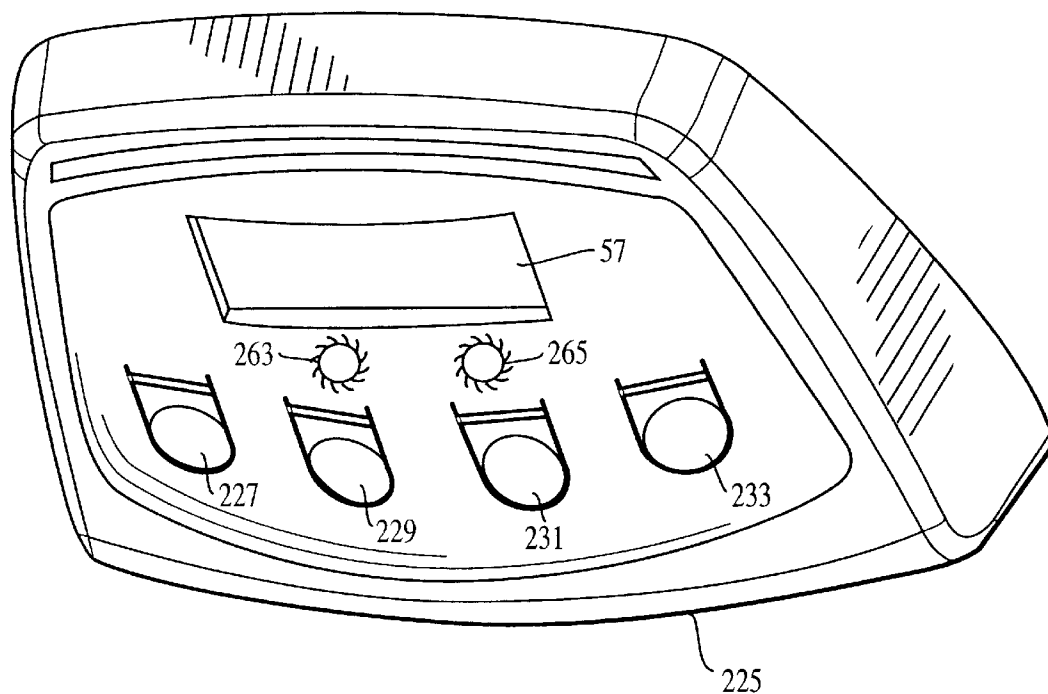


FIG. 12

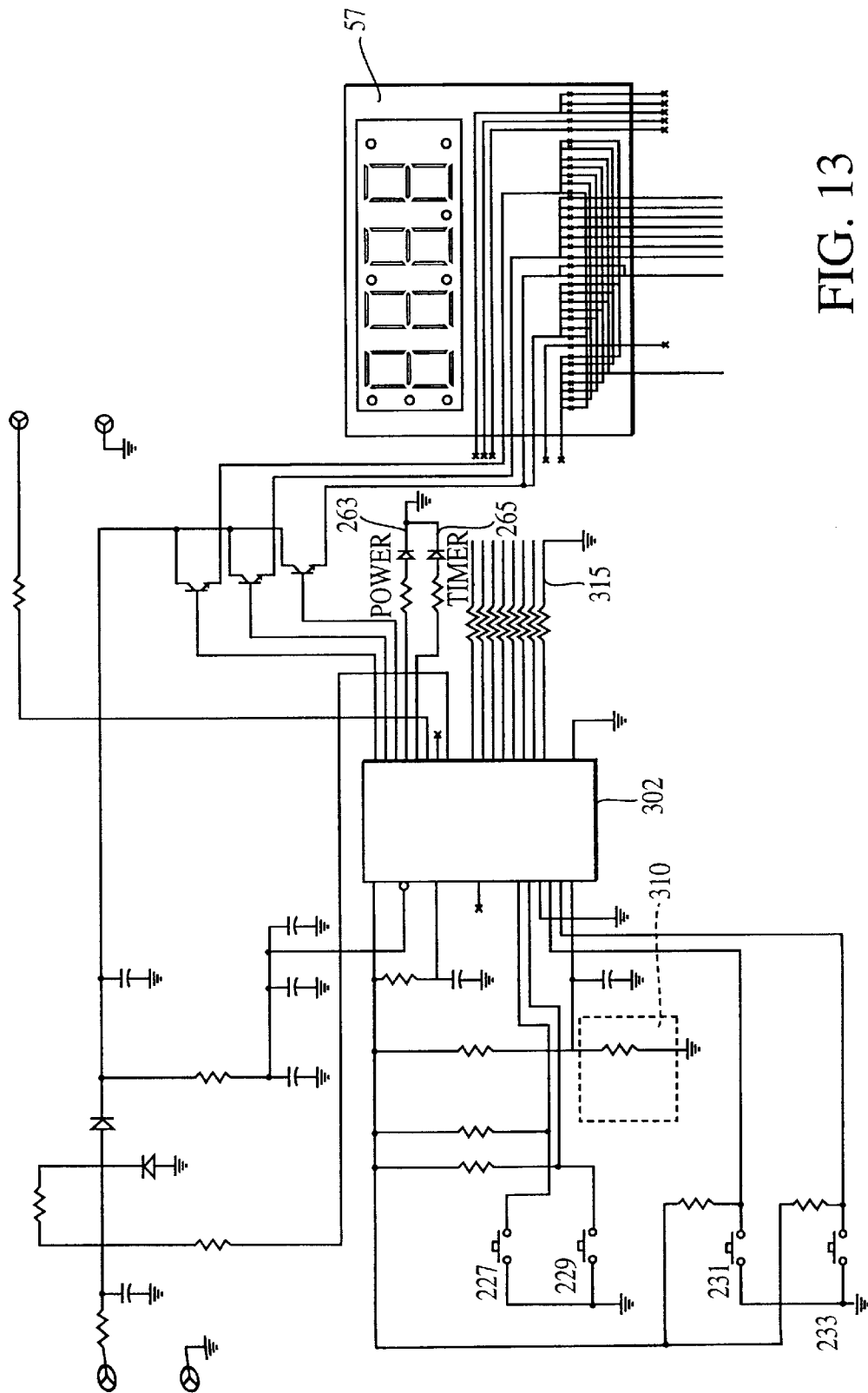


FIG. 13

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**PROGRAMMABLE SLOW-COOKER
APPLIANCE**

This application is a continuation of application Ser. No. 09/802,174, filed Mar. 8, 2001, (pending), which is hereby incorporated by reference herein.

This application claims priority to Provisional Application No. 60/189,443, filed Mar. 15, 2000, and to Provisional Application No. 60/196,273, filed Apr. 5, 2000.

This application also claims priority to U.S. patent application Ser. No. 09/802,174, filed Mar. 8, 2001, now U.S. Pat. No. 6,573,483 the entirety of which is incorporated herein.

BACKGROUND OF THE INVENTION

Time and convenience are in short supply for homemakers wishing to supply a home-cooked meal to family members. Some appliances, such as slow-cooker appliances, attempt to meet this need by providing all-day cooking while a homemaker is absent. Such appliances, however, tend to be of the type where only one temperature and all day cooking is possible, regardless of the food item, and thus potentially subjecting the food item to over- or under-cooking. Another option may be to use a cooking unit with, a controller, where a user may set a time or temperature desired. These units, however, tend to be quite a bit larger and more expensive than slow-cooker appliances. If these units are of more reasonable size, they also suffer because the controller inevitably must be placed near the heating element.

What is needed is a cooking appliance in which the user retains control over the time and temperature of cooking, but which is small enough to be convenient. What is needed is a slow-cooker unit in which the controller does not become overheated and damaged by the heating element.

SUMMARY OF THE INVENTION

One embodiment of invention is a programmable slow-cooker appliance, including a heating unit, which includes upstanding sidewalls and a bottom wall. The sidewalls and bottom encompass a heating area. The appliance includes a heating element mounted on the inner surface of the interior wall of the heating unit. In one embodiment, the cooking area may also encompass a cooking unit inside the heating unit, suitable for holding food to be cooked. The appliance includes a programmable controller mounted thereto via a controller housing, which acts to insulate the controller from the heat of the appliance, preferably via a unique system of ventilation. The housing utilizes ventilation holes on its bottom and top to encourage a chimney effect, in which air from the surroundings is drawn through the housing. This air cools the controller, and the air is then exits from ventilation holes near the top of the housing, convecting heat away from the controller.

Another aspect of the invention is a method of using the programmable controller to ensure that food is cooked according to the desires of a user. The user provides a food item and places the food item into the slow-cooker appliance, as described above. The user sets a cooking time and temperature for the programmable slow-cooker unit, using the controls to set both the time and the temperature. The cooking time according to one embodiment may not be set less than four hours, and the temperature may not be set for less than 150 degrees Fahrenheit (66 degrees Celsius). This prevents a user from accidentally setting the cooker to a "warm" temperature, in which food would only be warmed but not cooked thoroughly before consumption. In one embodiment, if the user sets no time or temperature, but

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merely turns the cooker on, the cooker defaults to a particular time and temperature, set by the user or the factory, such as a default setting of four hours and 175 degrees Fahrenheit or eight hours and 150 degrees Fahrenheit.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of an embodiment of a prior art slow-cooker appliance having an oval shape that may be utilized in the present invention;

FIG. 2 is a perspective view of a prior art embodiment of a cooking unit 14 which may be utilized with the appliance of FIG. 1;

FIG. 3 is a perspective view of a prior art cooking unit 39 similar to that shown in FIG. 2, but having a circular shape;

FIG. 4 is a perspective view of a slow cooker appliance incorporating the present invention;

FIG. 5 is a detailed plan view of a portion of the control 200 of the embodiment of FIG. 4;

FIG. 6 is a bottom plan view of the embodiment of FIG. 4;

FIG. 7 is a side cutaway view of the embodiment of FIG. 4;

FIG. 8 is a plan view of a heat sink 256 as utilized in the embodiment of FIG. 4;

FIG. 9 is a side view taken along a line 9—9 of FIG. 8;

FIGS. 10 and 13 are schematic circuit diagrams showing the circuitry and components implemented in preferred embodiments;

FIG. 11 is a wiring diagram showing some of the electric componentry of the preferred embodiment; and

FIG. 12 is an embodiment of the front panel.

**DETAILED DESCRIPTION OF THE
PREFERRED EMBODIMENTS**

Referring to FIG. 1, one prior art embodiment of a food-heating slow-cooker appliance 10 is shown. The appliance 10 preferably comprises a heating, unit 12 and a cooking unit 14. An exemplary slow cooker appliance 10 may be a Crock-Pot® Slow Cooker made by The Rival Division of The Holmes Group® of Milford, Mass. The heating unit 12 preferably has a bottom 16 and a continuous outer sidewall 18. The bottom 16 and an interior sidewall 17 define a well-like heating chamber 20 having an oval cross-section, and the interior sidewall 17 defines an annular lip 22 at an upper edge of the outer sidewall 18 and the interior sidewall 17. The heating chamber 20 has a heating element 24 disposed therein and mounted to the heating unit 12, either under the bottom 16 or additionally between the outer sidewall 18 and the interior sidewall 17. A control switch 26 is conventionally used to provide electricity to the heating element 24. The heating element 24 functions to heat the cooking unit 14 via the heating chamber 20.

As shown in FIG. 2, the cooking unit 14 has a bottom 28 with preferably a continuous sidewall 30 upstanding therefrom. The continuous sidewall 30 preferably has an annular lip 38 projecting in flange-like fashion from the upper end thereof and a substantially oval cross-section. The cooking unit 14 is adapted to be at least partially received within the heating unit 12 with the annular lip 38 of the cooking unit 14 preferably engaging the annular lip 22 of the heating unit 12, supporting the cooking unit 14 within the heating unit 12. Preferably, the annular lip 38 further defines a pair of handle portions 38(a) and 38(b) to facilitate lifting the cooking unit 14. The cooking unit 14 is preferably made of ceramic with a coating of conventional glazing compound.

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The thermal and heat retaining properties of the ceramic cooking unit **14** allow it to conduct heat from the heating chamber **20** through the sidewall **30**. This provides even heating throughout the unit **14**.

As shown in FIG. **3**, an alternative embodiment of the appliance **10** includes a cooking unit **39** having a sidewall **40** and a substantially circular cross-section. This embodiment is preferably adapted to fit within a heating unit having a complementary circular heating chamber. This cooking unit **39** is used in an embodiment of the present invention shown in FIG. **4**.

In use, the heating unit **12** is provided with a first cooking unit **39**. The heating element **24** (not shown) may be powered on and off as necessary to supply heat at a maintained temperature to the cooking unit **39** and the heating chamber via a programmable control **200**. The control **200** preferably includes a circuit board housing **210**, a control panel **220**, and an insulation shield **222** assembled together for attachment to the outer sidewall **18** of the heating unit **12**. The interior of the housing **210** contains a printed circuit board **254** (shown in FIG. **7**) containing electronic components of the control.

As shown in FIGS. **5** and **6**, the housing **210** preferably includes a control panel user interface **224** located on an inclined front surface of the housing **210**. Preferably, the housing **210** and insulation shield **222** are made from a thermoplastic material such as polypropylene. A pair of side walls **226**, a top wall **228**, and bottom wall **230** are preferably located adjacent the control panel **224** and support the control panel **224** in an inclined position away from the front of the cooking appliance **10**. This gives the user access to the control panel **224**, and also locates the controls and componentry within the housing **210** away from a significant amount of the heat generated by the appliance **10**. The printed circuit board **254** may be mounted via threaded screws **255** to rearwardly projecting screw receiving portions **258** on the rear side of the housing **210**.

The control panel **224** includes a plurality of indicator lights, such as LEDs **262**, spaced on the front panel **224**. As is well-known in the art, a variety of other indicator devices may be provided, including digital readouts, audible alarms, liquid crystal displays, incandescent lamps or fluorescent readouts. Preferably, the control panel **224** also includes a plurality of cantilevered portions **264** and **266** as shown in FIG. **5**. The cantilevered portions **264**, **266** preferably include rearwardly projecting fingers **268** (shown in FIG. **7**) which translate the depression of the portions **264**, **266** toward the rear portion of the housing **210**. The fingers **268** are preferably used to depress pushbutton switch portions located on the circuit board **254**. A water-impermeable label membrane may be applied over the front of the control panel **224** to label the indicators **262** and cantilevered portions **264** and **266** for the user. The membrane may also protect the front control panel **224** from damage from spilled foods or liquids and facilitate cleaning.

To further protect the electronic componentry within the housing **210** from the heat generated by the appliance **10**, the annular shield member **222** is preferably sized for interposition between the heating unit **12** and the housing **210**. In particular, as shown in FIGS. **5** and **6**, the shield **222** includes a top wall **232**, a pair of side walls **234**, and a bottom wall **236**. The shield **222** acts as a ventilated spacer to hold the electronic components and the housing **210** at a distance away from sidewall of the cooking unit **12**.

In order to dissipate heat that may otherwise be retained between the cooking unit **12** and the rear of the housing **210**,

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an air circulation space is provided within the shield. In particular, as shown in the side cutaway view of FIG. **7**, the air space **240** behind the shield **222** may vent warmer air out through an upper elongated slot **242** defined within the top wall **232** of the shield **222**. Likewise, an elongated slot **244** is defined into the air space **240** in the bottom wall **236** of the shield **222**. Heated air may thus escape through the top elongated slot **242** and cooler air may enter the air space **240** through the bottom elongated slot **244**. As shown in FIG. **7**, the shield **222** also preferably defines a rearwardly projecting cylindrical flange **246** that extends into the outer wall **18** to allow passage of control and power wiring between the interior of the heating unit **12** and the interior of the housing **210**.

In a similar fashion, air circulation is promoted through the housing **210** through a set of openings, preferably defined between the upper portion and, the bottom of the housing **210**. In particular, a plurality of openings **250** are defined within the bottom wall **230** of the housing **210**. An elongated upper slot **252** is provided on the front face **224** of the housing **210**. This allows air to freely circulate behind the control panel **224** and assist in the dissipation of heat from the circuit board **254** and its electronic componentry within the housing **210**. Preferably, a heat sink **256** is provided as shown in FIG. **7** and positioned between the circuit board **254** and the front panel **224** inside the housing **210**. The sink **256** preferably includes a plurality of openings defined therein to allow air to circulate between the openings **250** and **252** and through and around the heat sink **256** to dissipate additional heat therefrom. Also shown is the relative position of cooking unit **14**.

FIGS. **8** and **9** show a detailed view of the heat sink **256**. Preferably, the heat sink is machined from 0.063 inch thick 3003-0 anodized aluminum. The heat sink **256** is preferably bent at a 160 degree angle between a bottom flange portion **256a** and an upper portion **256b**. A centrally located retaining tab portion **256c** is bent parallel with the lower portion **256a**, and the portions **256a** and **256c** are used for attachment of the heat sink **256** to the rear side of the housing **210** interior via the rearwardly projecting screw receiving portions **258**. To maximize the dissipation of heat, a plurality of winged sections **257** and **259** are provided on the heat sink **256** and extend outwardly from a center portion **256a** of the heat sink **256**. A plurality of openings are defined through the heat sink **256** to allow the fingers **258** of the control panel cantilevered portions **264**, **266** to project through the heat sink and contact the circuit board **254** at the rear of the housing **210**. The openings **251** also facilitate cooling air flow through and past the heat sink **256** to further dissipate heat therefrom.

The circuit board **254** mounts circuitry and logic allowing the user of the appliance **10** to electronically control and program cooking cycles and temperature. A schematic diagram of the electronic circuitry and components is shown in FIG. **10**. The diagram shows a preferred exemplary circuit incorporating preferred components as utilized in the preferred embodiment of the present invention. One skilled in the art will recognize that the componentry illustrated herein is exemplary only and that many other components may be substituted to achieve the functions described herein. FIG. **10** includes labels for each of the components of the circuit, and only major components will be described herein.

First, as shown in the diagram, the preferred circuit **300** is preferably built around an EPROM/ROM-based CMOS microprocessor controller **302**, such as the PIC16CR54C RISC CPU manufactured by Microchip Technology, Inc. The chip output preferably includes circuited drivers for **6**

LED indicators **262** (labeled **D3–D8**) as shown. These LED indicators may be assigned labels as follows:

LED	Indicates
D3	On
D4	WARM
D5	4 HOUR
D6	6 HOUR
D7	8 HOUR
D8	10 HOUR

Two momentary pushbutton contact switches **S1** and **S2** are used to trigger the “Off” and “Cook” features, respectively, as will be described in the cooking procedure below. Of course, other indicators and switches may be substituted. Note that while examples are given, the circuitry may be implemented in numerous ways, as is well-known in the art, to accomplish the varying programming modes described below.

The temperature of the cooking appliance is measured using a thermistor **310**, which is connected externally of the circuit board to the underside of the bottom of the heating chamber. A retention clip **320**, shown in FIG. 7, is utilized to hold the thermistor in thermal contact with the bottom **16**. In a preferred embodiment, the appliance uses a model **USX1732** thermistor manufactured by U.S. Sensor, Inc.

Triac **304**, which is preferably a logic Triac Model **L4008L6-ND** manufactured by Digi-Key, Inc., is utilized to switch the power supplied to the heating elements of the appliance. Preferably, the Triac is of an isolated tab type and includes a heat sink tab that is fastenable to the heat sink **256** shown in FIGS. 8 and 9. Preferably, the Triac is mounted separately to one of the mounting holes on the center portion **256a** of the heat sink **256** so that the tab is in thermal contact with the heat sink **256** to dissipate heat generated from its current controlling function. Most of the other components of the circuit **300** are mounted on a conventional printed circuit board **254**.

FIG. 11 shows the wiring of the external Triac **304** in relation to the circuit board **254** and heating elements **24**. As shown in the Figure, the heating elements **24** are in thermal contact with and wrapping around the interior sidewall **17** of the heating unit.

The operation of the appliance **10** is as follows. The programmable circuitry **300** allows the user to set both the temperature and desired time for cooking. The functions of the switches **S1** and **S2**, which are activatable via the cantilevered portions **264** and **266** of the control panel **224**, are as follows:

- S1. OFF** pushbutton—turns the appliance **10** off.
- S2. COOK** pushbutton—subsequent pushes of the button cycle through 4 hour, 6 hour, 8 hour and 10 hour cook times.

When the unit is plugged in, the power “on” indicator flashes. The user then pushes the COOK button (switch **S2**) to set the temperature and cooking time. As the user pushes the COOK switch **S2**, the LED’s **D5–D8** illuminate to indicate the corresponding time setting as follows.

LEDs

- D3. POWER**—on when appliance **10** is in cook or warm modes.
- D5. 4 HOUR**—on when appliance is in 4-hour cook mode
- D6. 6 HOUR**—on when appliance is in 6-hour cook mode
- D7. 8 HOUR**—on when appliance is in 8-hour cook mode

D8. 10 HOUR—on when appliance is in 10-hour cook mode

D4. WARM—on when appliance is in half-power mode
Thus, subsequent pushes of the COOK switch **S2** activate different cooking modes, as shown by the 6 HOUR, 8 HOUR and 10 HOUR LEDs **262** on the control panel **224**. If the COOK switch **S2** is pressed in the 10 HOUR mode, the control **200** recycles to the 4 HOUR cooking mode, and its indicator.

In general, full power will be applied to the heating element **24** until the time corresponding to the illuminated LED elapses, after which the power to the heating element **24** is reduced by half, the WARM indicator illuminates and all cook time indicators extinguish. The choices of operation are: 4 or 6 hours on a HI temperature, and 8 to 10 hours on a lower temperature setting. Once the user selects the desired setting, the appliance **10** starts the cooking operation. Once the time setting has expired, the appliance **10** automatically reduces power to the heating element **24** to put the unit in a WARM setting. The unit will stay in the WARM setting until the user pushes the OFF button or unplugs the unit. Of course, other programming schemes are possible.

Preferably, the user cannot set the unit initially in the WARM setting. The system will only go to WARM after one of the time functions has expired. This avoids possible food safety problems that may be associated with cooking food only on the WARM setting. Pressing the OFF switch **S1** any time the unit is on preferably removes power from the heating element **24** and extinguishes all indicator LEDs **262**.

In another embodiment, the slow-cooker appliance utilizes four push-button switches, rather than two, to set times and temperatures for cooking. An exemplary control panel is depicted in FIG. 12, with control circuitry in FIG. 13. Four momentary pushbutton contact switches **227, 229, 231, 233** are used to trigger various power and setting functions as will be described in the cooking procedure below. Of course, other numbers or types of indicators and switches may be substituted as well. FIG. 13 shows circuitry applicable to such an embodiment, incorporating controller **302**, external temperature element **310**, digital readout **57**, and Power LED **263** and Timer LED **265**. The Power LED indicates power is present at the microprocessor controller and the Timer LED indicates that the Timer function is on and working.

The operation of the appliance is as follows. The programmable circuitry allows the user to set both the temperature and the desired cooking time. The functions of the switches **227, 229, 231, 233** on an alternative embodiment of a control panel user interface **225**, are as follows:

- 227. ON/OFF** power pushbutton—turns the appliance on and off.
- 229. TIMER** pushbutton—activates stepped timer.
- 231. UP** pushbutton—increases displayed numerical value.
- 233. DOWN** pushbutton—decreases displayed numerical value.

When the unit is plugged in, the unit defaults to 150-degrees F. as shown on the digital display **57**. The user may adjust the desired cooking temperature in 25-degree increments using the UP **231** button or the DOWN button **233**, with 150 degrees Fahrenheit as a minimum temperature. Once the user has selected the specific temperature, the appliance will start the cooking process.

The user may also select the TIMER mode by pressing the TIMER button **229**. In TIMER mode, the controller defaults to 4 hours. The user can use the UP or DOWN controls to

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increase or decrease the time in 15-minute increments. Once the time is set, the controller 302 will count down the time remaining for cooking in 1 minute increments until the unit "times out". At that time, the power is shut off from the heating element.

In all modes, the temperature is read periodically by the thermistor or other temperature element and relayed to the controller. The reading is checked at 4-second intervals. If the temperature is above or equal to the set point, power is removed. If it is below the set point, power is applied to the heating element 32. Of course, the circuitry can be modified as desired to achieve various program methods and modes.

Another embodiment of the slow cooker appliance adds a piezobuzzer to the circuitry. A piezobuzzer is simply an electrically-activated buzzer that can be programmed to emit a sound at desired moments. In one embodiment, a piezobuzzer may be installed as an output 315, controlled by the microprocessor controller 302, as shown in FIG. 13, and programmed to emit a sound when desired. In one embodiment, the buzzer may beep to provide feedback to a user when a pushbutton is pushed. The slow cooker may also be programmed to emit a sound to indicate the end of the cooking time. The buzzer may also be used to emit sounds at other desired times.

It is intended that the foregoing description illustrates rather than limits this invention, and that it is the following claims, including all equivalents, which define this invention. Of course, it should be understood that a wide range of changes and modifications may be made to the embodiments described above. Accordingly, it is the intention of the applicants to protect all variations and modifications within the valid scope of the present invention. It is intended that the invention be defined by the following claims, including all equivalents.

What is claimed is:

1. A programmable slow-cooker appliance comprising:

a heating unit including a bottom and a continuous sidewall extending from said bottom, said bottom and said continuous sidewall including an outer sidewall and an interior sidewall and defining a well-like heating chamber;

a heating element mounted to said heating unit and disposed between said outer sidewall and said interior sidewall;

a cooking unit at least partially received within said well-like chamber;

a non-conductive housing fixedly mounted to and projecting outside said continuous sidewall of said heating unit, said housing having a bottom wall;

a lower vent in said bottom wall of said housing for admitting relatively cool air to said housing;

an upper vent in said housing for allowing the escape of relatively warm air from said housing;

a programmable circuit positioned within said housing such that heat is convected away therefrom as air passes through said housing and said vents and electrically connected to said heating element to electronically control and program cooking cycles and temperature; and

a control panel on said housing, said control panel being electronically connected to said programmable circuit.

2. A programmable slow-cooker appliance as described in claim 1 wherein said housing is comprised of a shield and a housing portion, said shield being interposed between and adjoining said outer sidewall of said heating unit and said housing portion, said control panel being incorporated on said housing portion.

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3. A programmable slow-cooker appliance as described in claim 2 including a circuit board including said circuit mounted to and positioned within said housing, and a Triac electrically connected between said circuit board and said heating element.

4. A programmable slow-cooker appliance as described in claim 3 further including a heat sink position within said housing between said circuit and said control panel.

5. A programmable slow-cooker appliance as described in claim 4 wherein said Triac includes a heat sink tab in thermal contact with said heat sink.

6. A programmable slow-cooker appliance as described in claim 1 wherein said control panel includes a user interface located on an inclined front surface of said housing spaced away from said outer sidewall of said heating unit.

7. A programmable slow-cooker appliance as described in claim 6 wherein said lower and upper vents are positioned to allow air to circulate behind said control panel and assist in the dissipation of heat from said programmable circuit.

8. A programmable slow-cooker appliance as described in claim 6 wherein said housing is comprised of a shield and a housing portion, said shield being interposed between and adjoining said outer sidewall of heating unit and said housing portion, said control panel being incorporated on said housing portion.

9. A programmable slow-cooker appliance as described in claim 8 wherein said upper and lower vents are in said housing portion.

10. A programmable slow cooker appliance as described in claim 9 wherein said housing is comprised of a thermoplastic material.

11. A programmable slow-cooker appliance as described in claim 1 wherein said cooking unit is made from a ceramic material and is removably positioned in said well-like chamber.

12. A programmable slow-cooker appliance comprising:

a heating unit including a bottom and a continuous sidewall extending from said bottom, said bottom and said continuous sidewall defining a well-like chamber;

a heating element mounted to said heating unit for providing heat to said well-like chamber;

a ceramic cooking unit removably positioned in said well-like chamber;

a non-conductive housing fixedly mounted to and projecting outside said continuous sidewall of said heating unit;

a programmable circuit positioned within said housing and electrically connected to said heating element to electronically control and program cooking cycles and temperature;

means including vents in said housing for cooling said programmable circuit by convecting heat away therefrom; and

a control panel mounted to said housing and electrically connected to said programmable circuit.

13. A programmable slow-cooker appliance as described in claim 12 wherein said programmable circuit includes a microprocessor controller.

14. A programmable slow-cooker appliance as described in claim 13 wherein said housing is comprised of a shield and a housing portion, said shield being interposed between and adjoining said sidewall of said heating unit and said housing portion, said control panel being incorporated on said housing portion.

15. A programmable slow-cooker appliance as described in claim 12 including means for automatically switching said heating element from a cook mode to a warm mode.

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16. A programmable slow-cooker appliance as described in claim 15 including a Triac electrically connected between said programmable circuit and said heating element.

17. A programmable slow-cooker appliance as described in claim 16 including a heat sink positioned within said housing, said Triac including a heat sink tab in thermal contact with said heat sink.

18. A programmable slow-cooker appliance as described in claim 12 wherein said means for cooking includes a lower vent in said housing for admitting relatively cool air to said housing and an upper vent in said housing for allowing the escape of relatively warm air from said housing.

19. A programmable slow-cooker appliance as described in claim 12 wherein said programmable circuit is configured to switch said heating element from a cooking mode to a warming mode at the expiration of a set cooking time.

20. A programmable slow-cooker appliance comprising:

a heating unit including a bottom and a continuous sidewall extending from said bottom, said bottom and said continuous sidewall defining a well-like chamber, said continuous sidewall including an outer sidewall and an interior sidewall;

a heating element mounted to said heating unit and disposed between said outer sidewall and said interior sidewall;

a housing fixedly mounted to and projecting outside said continuous sidewall of said heating unit;

a programmable circuit positioned within said housing and configured to automatically switch said heating element from a cook mode to a lower temperature warm mode at the end of a set cooking time;

a control panel mounted to said housing and including a user interface connected to said programmable circuit for selecting a cooking temperature and cooking time; and

a cooking unit removably positioned in said well-like chamber.

21. A programmable slow-cooker appliance as described in claim 20 wherein said housing includes a plurality of vent openings, a thermoplastic shield and a housing portion, said shield being disposed between and adjoining said outer sidewall of said heating unit and said housing portion, said housing portion including a control panel.

22. A programmable slow-cooker appliance as described in claim 21 including a heat sink positioned within said housing.

23. A programmable slow-cooker appliance as described in claim 22 including a Triac positioned within said housing and electrically connected between said programmable circuit and said heating element, said Triac being in thermal contact with said heat sink.

24. A programmable slow-cooker appliance as described in claim 20 wherein said housing is comprised of a thermoplastic material and said cooking unit is comprised of a ceramic material, said cooking unit being removably positioned in said well-like chamber.

25. A programmable slow-cooker appliance as described in claim 21 wherein said housing is comprised of a thermoplastic material and said cooking unit is comprised of a ceramic material.

26. A programmable slow-cooker appliance as described in claim 20 wherein said programmable circuit is configured such that a user cannot initially set a lower temperature warm mode.

27. A programmable slow-cooker appliance as described in claim 20 including a switch operatively associated with

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said control panel, said programmable circuit being configured such that subsequent pushes of said switch activates different cook modes.

28. A programmable slow-cooker as described in claim 27 wherein said housing is vented.

29. A programmable slow-cooker appliance as described in claim 20 wherein said housing includes a thermoplastic portion adjoining and extending into said continuous sidewall of said heating unit.

30. A programmable slow-cooker appliance as described in claim 20 wherein said circuit is configured to default to cause operation of said appliance at a cooking temperature when plugged into a power source.

31. A slow-cooker appliance comprising:

a heating unit including a bottom and a sidewall defining a well-like heating chamber and a heating element for providing heat to said heating chamber;

a ceramic cooking unit including a bottom, a continuous sidewall upstanding from said bottom, and a lip extending outwardly from said sidewall, said cooking unit being dimensioned to be at least partially received within said well-like heating chamber and supported by engagement of said lip with said heating unit;

a housing assembly mounted to and projecting outwardly from said sidewall of said heating unit, said housing assembly including a thermoplastic portion adjoining said outer sidewall, an inclined front surface including a control panel having a user interface, and a vent opening; and

a programmable circuit positioned within said housing assembly, said user interface being connected to said programmable circuit for selecting cooking temperature and cooking time, said programmable circuit being configured to automatically switch said heating element from a cook mode to a lower temperature warm mode at the end of a set cooking time.

32. A slow-cooker appliance as described in claim 31 wherein said thermoplastic portion of said housing assembly extends into said sidewall of said heating unit.

33. A slow-cooker appliance as described in claim 31 wherein said housing assembly includes a bottom wall including a plurality of vent openings.

34. A slow-cooker appliance as described in claim 33 wherein said housing assembly includes a plurality of upper vent openings such that heat is convected away from said programmable circuit as air flows into said housing assembly through said vent openings in said bottom wall, through said housing assembly, and out of said housing assembly through said upper vent openings.

35. A slow-cooker appliance as described in claim 31 including a switch operatively associated with said control panel, said programmable circuit being configured such that subsequent pushes of said switch activates different cook modes.

36. A slow-cooker appliance as described in claim 31 wherein said circuit is configured to default to cause operation of said appliance at a cooking temperature when plugged into a power source.

37. A programmable slow-cooker appliance comprising:

a heating unit including a bottom and a continuous sidewall defining a well-like heating chamber and a heating element positioned for providing heat to said well-like heating chamber;

a cooking unit including a lip and adapted to fit at least partially within said heating unit such that said lip engages a top portion of said heating unit;

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a housing assembly mounted to and projecting from said sidewall of said heating unit, said housing assembly including a thermoplastic portion adjoining said sidewall of said heating unit, a bottom wall adjoining said sidewall, and an inclined front surface including a control panel user interface spaced from said sidewall; and

a circuit including a programmable controller positioned within said housing assembly and operatively associated with said user interface, said circuit being configured to allow a user to set both cooking temperature and cooking time and to cause said heating element to operate in a warm mode at the expiration of a set cooking time, said control panel being electronically connected to said circuit.

38. A programmable slow-cooker appliance as described in claim **37** wherein said circuit is incorporated on a printed circuit board and a heat sink is positioned in said housing assembly between said printed circuit board and said control panel user interface.

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39. A programmable slow-cooker appliance as described in claim **37** wherein said bottom wall of said housing assembly is vented.

40. A programmable slow-cooker appliance as described in claim **37** wherein said housing assembly includes an upper vent opening positioned such that, when operated, relatively cool air enters said housing assembly through said vented bottom wall, passes over said circuit, and relatively warm air exits said housing assembly through said upper vent opening.

41. A programmable slow-cooker appliance as described in claim **37** wherein said circuit is configured to default to cause operation of said appliance at a cooking temperature when plugged into a power source.

42. A programmable slow-cooker appliance as described in claim **41** including a switch operatively associated with said control panel such that subsequent pushes of said switch activates different cooking times and temperatures.

* * * * *

EXHIBIT C

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS**

THE HOLMES GROUP, INC.,	:	
	:	
Plaintiff,	:	Civil Action No. 05-CV-11367 REK
v.	:	(Alexander, M.J.)
	:	
WEST BEND HOUSEWARES, LLC and	:	
FOCUS PRODUCTS GROUP, L.L.C.,	:	
	:	
Defendants.	:	

**HOLMES' SECOND SUPPLEMENTAL RESPONSE
TO WEST BEND'S FIRST SET OF INTERROGATORIES**

Plaintiff, The Holmes Group, Inc. (hereinafter "Holmes") submits the following Answers to Defendants, West Bend Housewares, LLC and Focus Products Group, L.L.C. (hereinafter collectively "West Bend") First Set of Interrogatories.

These Answers are subject to the following general objections.

GENERAL OBJECTIONS

Each of Holmes' responses are subject to the following objections and conditions as if such objections and conditions were fully set forth in said response. The responses do not repeat each such objection or condition.

1. Holmes objects to the Interrogatories to the extent they request information not relevant to the subject matter of the pending action.
2. Holmes objects to the Interrogatories to the extent they are unreasonably cumulative or duplicative, or seek information obtainable from some other source that is more convenient, less burdensome or less expensive.

3. Holmes objects to the Interrogatories to the extent they request information that is protected from disclosure by the attorney-client privilege, the attorney work product doctrine, the protection afforded to materials prepared in anticipation of litigation or any other applicable privilege or immunity. Nothing contained in these objections and responses is intended to be, or in any way constitutes, a waiver of any applicable privilege, immunity or doctrine. Any document or thing withheld on the grounds of an applicable privilege or immunity will be identified on a separate privilege log. Holmes objects to identifying documents generated since the inception of this lawsuit by or at the direction of trial counsel, as such identification is likely to reveal work-product and/or attorney-client privileged information.

4. Holmes objects to the disclosure of confidential information and the production of documents containing confidential information until the Court enters an appropriate Protective Order.

5. Holmes objects to the Interrogatories to the extent they impose obligations on Holmes that go beyond the requirements set forth in the Federal Rules of Civil Procedure and Local Rules for the District of Massachusetts.

6. Holmes objects to West Bend's definitions and instructions to the extent they impose obligations on Holmes that go beyond the requirements set forth in the Federal Rules of Civil Procedure and Local Rules for the District of Massachusetts.

7. As discovery in this case is ongoing, Holmes reserves the right to supplement its objections and responses to West Bend's requests.

SPECIFIC OBJECTIONS AND RESPONSES

Subject to the foregoing General Objections, Holmes responds as follows:

Interrogatory No. 1

Identify each claim of the Holmes patents-in-suit that you contend is infringed by West Bend Housewares or Focus and state in detail your infringement contentions and claim construction by completing a claim chart comparing each West Bend Housewares cooker you contend infringes any of the Holmes patents-in-suit with each asserted claim of each Holmes patent-in-suit, on a limitation-by-limitation basis, describing the complete factual and legal bases for any contention by Holmes that any claim limitation is present in the West Bend Housewares cooker(s) you accuse of infringement, including whether each element is present literally or present under the doctrine of equivalents, whether the alleged infringement is direct or indirect, and identifying the documents and things that you contend supports your contentions and claim construction, and each person having knowledge of any factual bases for the response.

Response to Interrogatory No. 1

Holmes objects to this interrogatory to the extent that it seeks information protected by the attorney/client privilege and/or work product immunity. Subject to and without waiver this objection and the General Objections, Holmes responds as set forth in Exhibit A attached hereto. Holmes further responds that the documents and things supporting the infringement contention are the file histories of the Holmes patents-in-suit, the West Bend accused products and the West Bend Instruction Manual for the accused products. The persons having knowledge regarding the infringement contentions are counsel of record for Holmes, Charles R. Hoffmann and Glenn T. Henneberger.

Interrogatory No. 2

Identify the field of art and characteristics of a person having ordinary skill in the art for the Holmes patents-in-suit.

Response to Interrogatory No. 2

Subject to the General Objections, Holmes responds that the field of art is slow-cooker appliances and a person having ordinary skill in the art relative to the claimed inventions in the Holmes patents-in-suit is an engineer having at least a Bachelor of Science degree and/or a designer having several years experience in the design, development and manufacture of slow-cooker appliances.

Interrogatory No. 3

For each West Bend Housewares cooker identified in response to Interrogatory No. 1, describe the circumstances under which any person at Holmes first had knowledge of such product, describe any analysis, examination or investigation conducted by Holmes, or on Holmes' behalf, of such product that provided the basis for Holmes' infringement contentions, describe the circumstances of such analysis, examination or evaluation, identify any documents referring or relating to such analysis, examination or evaluation, and identify the person(s) involved.

Response to Interrogatory No. 3

Holmes objects to this interrogatory to the extent that it seeks information protected by the attorney/client privilege and/or work product immunity. Subject to and without waiver of this objection and the General Objections, Holmes responds that on or about June, 2005, Bill Henry, an employee of Holmes, obtained a West Bend 6-Quart Electronic Cookery™ Cooker, Model 84386 from Wal-Mart. Other employees of Holmes who were advised of the West Bend

programmable slow cooker include Bart Plaumann (Senior Vice President and General Manager, Kitchen Business Unit), Frank Marino (Vice President of Intellectual Properties), Timothy Gallogly (Vice President and Associate General Counsel) and Paul Izzo (former General Counsel and Senior Vice President). The unit was shipped to Holmes' counsel of record for analysis with respect to Holmes' patents related to programmable slow cookers. Holmes' counsel of record, Charles R. Hoffmann and Glenn T. Henneberger conducted an infringement investigation of the West Bend product. The investigation included analysis of the structure and operation of the West Bend product compared to the claims of the Holmes patents-in-suit. The non-privileged documents related to Holmes analysis of the West Bend programmable slow cooker include the Holmes' patents-in-suit and the West Bend Instruction Manual. See generally THG00001 - THG0001251 and THG007984-7995.

Interrogatory No. 4

Separately for the subject matter of each claim of the Holmes patents-in-suit, state the date on which the subject matter of each claim was first conceived, including identification of the person(s) who conceived of such subject matter and any and all documents corroborating or otherwise related to the dates of such conception, and the date on which the subject matter of each claim was first reduced to practice, including identification of the person(s) who reduced to practice such subject matter and any and all documents corroborating or otherwise related to the dates of such first reduction to practice.

Response to Interrogatory No. 4

Holmes objects to this interrogatory to the extent that it seeks information protected by the attorney/client privilege and/or work product immunity. Subject to and without waiver of this objection and the General Objections, pursuant to Fed. R. Civ. P. 33(d), Holmes has

produced non-privileged business records from which the information requested can be derived or ascertained. See generally THG00001-1251 and THG0007829-7955. Holmes further responds that its date of conception and reduction to practice of the inventions in the Holmes patents-in-suit is at least as early as the date of the Housewares Show in January 2000. Persons knowledgeable with respect to the conception and reduction to practice of the inventions in the Holmes patents-in-suit include Charles Thrasher, Jr., Lorens Hlava, and James DeCobert. Holmes investigation regarding these matters is ongoing and Holmes reserves the right to supplement its response as information becomes available.

Interrogatory No. 5

Identify each product (whether experimental or otherwise) developed, manufactured or produced for, or by, Holmes that embodies any claim of the Holmes patents-in-suit, including the name and internal nomenclature of each such product, the patent claim(s) it embodies, the supplier or source of its constituent elements, if and when each such product was marked in accordance with 35 U.S.C. § 287, and identify the persons who are most knowledgeable about each such product.

Response to Interrogatory No. 5

Holmes objects to this interrogatory to the extent that it seeks information protected by the attorney/client privilege and/or work product immunity. Subject to and without waiver of this objection and the General Objections, Holmes responds that each of its programmable slow cookers is covered by at least one claim from the patents-in-suit. A listing of the Holmes programmable slow cookers is identified in document production numbers THG00007958-7983. Holmes further responds that it does not currently mark its products with the patent numbers.

Interrogatory No. 6

For each product identified in response to Interrogatory No. 5, describe in detail the circumstances, including the date(s) and person(s) involved, of the first sale, first offer for sale, first solicitation or inquiry for possible future sale of that product, as well as any solicitation, inquiry, or agreement for possible testing of that product, and the first disclosure, presentation, demonstration, or use of that product in front of anyone not then employed by Holmes.

Response to Interrogatory No. 6

Holmes objects to this interrogatory to the extent that it seeks information protected by the attorney/client privilege and/or work product immunity. Subject to and without waiver of this objection and the General Objections, Holmes responds that it first shipped programmable slow cookers in August, 2000. Holmes further responds that it first offered its programmable slow cooker for sale at the Housewares Show in January 2000 and that it first publicly displayed its programmable slow cooker at the Housewares Show in January 2000. The person knowledgeable with respect to these matters is Bart Plaumann. Pursuant to Fed. R. Civ. P. 33(d), Holmes has produced non-privileged business records from which the information requested can be derived or ascertained. See generally THG0007956-7983. Holmes investigation regarding these matters is ongoing and Holmes reserves the right to supplement its response as information becomes available.

Interrogatory No. 7

Identify in detail any and all evidence of secondary indicia of non-obviousness that Holmes contends supports or relates to the non-obviousness of any claims of the Holmes patents-in-suit, including: whether the claimed inventions, or any product that embodies or uses any claimed invention, has been commercially successful; whether the Holmes patents-in-suit have

been licensed to others; whether the claimed invention have been copied by others; whether anyone has praised, criticized or discussed the significance of the claimed inventions; whether the claimed inventions satisfied a long felt need in the industry; whether others tried and failed to make the claimed inventions; and whether the claimed inventions achieved unexpected results, and any and all other evidence that Holmes contends supports or relates to the non-obviousness of the Holmes patents-in-suit, including identification of all documents and persons with knowledge concerning such contentions.

Response to Interrogatory No. 7

Holmes objects to this interrogatory to the extent that it seeks information protected by the attorney/client privilege and/or work product immunity. Subject to and without waiver of this objection and the General Objections, Holmes states that its programmable slow cookers covered by the Holmes patents-in-suit have been commercially successful, satisfy a long felt need in the industry, have been copied by others and that Holmes may license the Holmes patents-in-suit to others. Pursuant to Fed. R. Civ. P. 33(d), Holmes has produced non-privileged business records from which the information requested to support Holmes answer can be derived or ascertained. See generally THG0007956-7983 and THG0006465-0006887.

Interrogatory No. 8

Separately for each Holmes patent-in-suit, describe in detail Holmes' contention that West Bend Housewares and Focus have willfully infringed, including identification of all documents supporting such contentions and any and all persons with knowledge or information of such contentions.

Response to Interrogatory No. 8

On October 14, 2004, counsel for Holmes sent a letter to West Bend placing them on notice of Holmes U.S. Patent Nos. 6,573,483 and 6,740,855 (the Holmes patents-in-suit). On October 26, 2004, West Bend's counsel, Martin Stern of Michael Best & Friedrich, LLP advised counsel for Holmes that they represented West Bend in intellectual property matters. On April 22, 2005, counsel for Holmes advised Mr. Stern that Holmes had been granted U.S. Patent No. 6,872,921. Notwithstanding the actual notice of the Holmes patents-in-suit, West Bend imported, distributed and sold slow cookers which infringe the Holmes patents-in-suit in willful, wanton disregard of the Holmes patents-in-suit. Pursuant to Fed. R. Civ. P. 33(d), Holmes has produced non-privileged business records from which the information requested to support Holmes answer can be derived or ascertained, including the correspondence with West Bend's counsel, the Holmes patents-in-suit and the West Bend accused product and associated Instruction Manual.

Interrogatory No. 9

State for all the Holmes Programmable Cookers sold from the date of first sale to the present: (a) gross dollar sales, (b) profits, and (c) number of units sold, and identify each person or entity who purchased or placed an order for Holmes Programmable Cookers and, for each such person or entity, state the date of each purchase or order, state the total dollar and unit

amounts each person or entity purchased or ordered, and identify all documents that reflect the dollar and unit amounts purchased or ordered.

Response to Interrogatory No. 9

Holmes objects to this interrogatory as unduly burdensome and not relevant to the issues in this case. Holmes further objects to this interrogatory to the extent that it seeks information protected by the attorney/client privilege and/or work product immunity. Subject to and without waiver of this objection and the General Objections, pursuant to Fed. R. Civ. P. 33(d), Holmes has produced non-privileged business records from which the information requested can be derived or ascertained. See generally THG0007956-7983.

Interrogatory No. 10

Identify all manufacturers of the Holmes Programmable Cookers and all persons and entities approached by Holmes to manufacture the Holmes Cookers and the date(s) each was approached.

Response to Interrogatory No. 10

Holmes objects to this interrogatory as unduly burdensome and not relevant to the issues in this case. Holmes further objects to this interrogatory to the extent that it seeks information protected by the attorney/client privilege and/or work product immunity. Subject to and without waiver of this objection and the General Objections, Holmes responds that its programmable slow cookers have been manufactured at the Rival facility in Clinton, MO. and at Holmes' Chinese facility, Holmes HTC, No. 9-16 Hung Yeh 15th Road, Hung Yeh Industrial Estate 138, Tangxia Town, Dongguan, PRC. The person familiar with Holmes manufacture of its slow cookers is John Rudolph, Director - New Product Development, Kitchen.

Interrogatory No. 11

Identify each person, whether or not employed by Holmes, who was involved in or knows about the conception, creation, design, or production of any catalog, packaging, advertising, marketing, promotional or sales material for the Holmes Programmable Cookers, and with respect to each such person, state in detail the nature of such involvement, or the extent of such knowledge.

Response to Interrogatory No. 11

Holmes objects to this interrogatory as unduly burdensome and not relevant to the issues in this case. Holmes further objects to this interrogatory to the extent that it seeks information protected by the attorney/client privilege and/or work product immunity. Holmes responds that the following individuals have been involved in the design and production of marketing materials: Mona Dolgov, Director of Marketing; Mary Hardy, Design Director; Susan Grassel, Product Manager; and Kelly White, former Product Manager. Notwithstanding the above, subject to and without waiver of this objection and the General Objections, pursuant to Fed. R. Civ. P. 33(d), Holmes has produced non-privileged business records from which the information requested can be derived or ascertained, including but not limited to sales and marketing materials. See generally THG0003088 - THG0005680.

Interrogatory No. 12

Identify the circumstances under which Holmes first learned of the existence of the West Bend Housewares patents-in-suit, including the date and manner in which Holmes came to know of the existence of the West Bend Housewares patents-in-suit and identify all persons with knowledge thereof and all documents relating thereto.

Response to Interrogatory No. 12

Holmes objects to this interrogatory to the extent that it seeks information protected by the attorney/client privilege and/or work product immunity. Notwithstanding this specific objection and the General Objections, Holmes states that it first became aware of the West Bend patents-in-suit upon service of West Bend's Answer and Counterclaims. The persons with knowledge thereof is Holmes counsel of record, Charles R. Hoffmann and Glenn T. Henneberger and Timothy Gallogly, Vice President and Associate General Counsel for Holmes.

Interrogatory No. 13

Explain in detail Holmes' contentions that any claim of the West Bend Housewares patents-in-suit is invalid under 35 U.S.C. §§ 102, 103 and 112, including identification of the documents that Holmes contends supports such contentions, the complete legal and factual basis for such contentions, and each person having knowledge of any factual basis or bases.

Response to Interrogatory No. 13

Each of the West Bend patents-in-suit are invalid under 35 U.S.C. § 102(b) in view of at least sales of oval slow cookers more than one year before the earliest effective filing date of the West Bend patents-in-suit. Specifically, each of the following Rival® Crockpot® brand slow cookers were sold in the United States in 1997, Model Nos. 3745-GR; 3745-PS and 3755-HG. Pursuant to Fed. R. Civ. P. 33(d), Holmes has produced non-privileged business records from

which the information requested to support Holmes answer can be derived or ascertained. See generally THG00030000-0030186.

Each of the West Bend patents-in-suit are invalid as being obvious over prior art round slow cookers. Holmes investigation regarding the invalidity of the West Bend patents-in-suit is ongoing. As further information becomes available, Holmes will supplement its response. Persons having knowledge of Holmes invalidity contentions are Holmes counsel of record, Charles R. Hoffmann and Glenn T. Henneberger.

Interrogatory No. 14

Explain in detail Holmes's contention that the West Bend Housewares patents-in-suit are not infringed, including any identification of all facts supporting this contention and the persons most knowledgeable of those facts.

Response to Interrogatory No. 14

To date, via oral communication only, West Bend has identified Rival® Crockpot® brand slow cooker Model Nos. 3730 and 37351 as allegedly infringing each of the West bend patents-in-suit. With respect to Holmes Model No. 3730, the ornamental appearance of the slow cooker is more similar to the prior art slow cookers identified in response to Interrogatory No. 13 than to that shown in each of the West Bend patents-in-suit. Thus, Holmes is practicing the prior art and therefore cannot infringe the West Bend patents-in-suit.

Furthermore, Holmes Model 3730 differs from the claimed design in several significant ways. With respect to U.S. Patent No. D444,993 (the '993 patent) the Holmes Model No. 3730 slow cooker includes a lid and crock which cooperate to form a shape significantly different from the shape of the lid and crock shown in Figs. 2-5 of the '993 patent. Additionally, the Holmes Model No. 3730 includes a crock having a lip which differs in shape from that shown in

Fig. 6 of the '993 patent. Lastly, Holmes Model No. 3730 includes a bottom surface having only three (3) feet coupled to a conical surface, a large oval indentation, a central circular indentation including a cylindrical fastener and a plurality of holes around an outer periphery of the bottom surface which differs in appearance from that shown in Fig. 7 of the '993 patent. Accordingly, Holmes Model No. 3730 is not substantially similar in overall appearance to the claimed design in the '993 patent and, therefore, does not infringe.

With respect to U.S. Patent No. Des 434,266 (the '266 patent), each of the differences set forth above also apply with the following additional differences. Holmes Model No. 3730 includes a top portion of the handle having a rounded periphery and a convex top portion. The convex top also includes a series of ornamental indentations around the outer periphery of the handle top. The '266 patent claims a handle having a top portion which is flat from a side view and whose outer periphery slopes down and inward from the top surface. Accordingly, for the reasons set forth with respect to the '993 patent as well as those set forth above, Holmes Model No. 3730 does not infringe.

With respect to U.S. Patent No. D444,664 (the '664 patent) each of the differences set forth above with respect to the '993 and '266 patents apply with the following additional differences. Holmes Model No. 3730 includes a bottom having only three (3) feet, wherein the shape of each foot includes a conical shaped portion leading to a cylindrical shaped portion which is substantially different from the four (4) cylindrically shaped feet shown in Figs. 2-5 and 7 of the '664 patent.

With respect to Holmes Model No. 37351, the ornamental appearance of the slow cooker is more similar to the prior art slow cookers identified in response to Interrogatory No. 13 than to

that shown in each of the West Bend patents-in-suit. Thus, Holmes is practicing the prior art and therefore cannot infringe the West Bend patents-in-suit.

Additionally, Holmes Model 37351 differs from the claimed design in several significant ways. With respect to U.S. Patent No. D444,993 (the '993 patent) the Holmes Model No. 37351 slow cooker includes a lid and crock which cooperate to form a shape significantly different from the shape of the lid and crock shown in Figs. 2-5 of the '993 patent. Furthermore, Holmes Model No. 37351 includes a crock having a lip which differs in shape from that shown in Fig. 6 of the '993 patent. The lid also includes a hole therein with a cylindrical washer surrounding the hole. Lastly, Holmes Model No. 37351 includes a bottom surface having only three (3) integrally formed, conically shaped, feet two (2) circular indentations each including a cylindrical fastener, and a plurality of holes in the bottom surface which differs in appearance from that shown in Fig. 7 of the '993 patent. Accordingly, Holmes Model No. 37351 is not substantially similar in overall appearance to the claimed design in the '993 patent and, therefore, does not infringe.

With respect to U.S. Patent No. Des 434,266 (the '266 patent), each of the differences set forth above also apply with the following additional differences. Holmes Model No. 37351 includes a top portion of the handle having a rounded periphery and a convex top portion. The convex top also includes a series of ornamental indentations around the outer periphery of the handle top. The '266 patent claims a handle having a top portion which is flat from a side view and whose outer periphery slopes down and inward from the top surface. Accordingly, for the reasons set forth with respect to the '993 patent as well as those set forth above, Holmes Model No. 37351 does not infringe.

With respect to U.S. Patent No. D444,664 (the '664 patent) each of the differences set forth above with respect to the '993 and '266 patents apply with the following additional differences. Holmes Model No. 37351 includes a bottom having only three (3) integrally formed, conically shaped feet which is substantially different from the four (4) cylindrically shaped feet shown in Figs. 2-5 and 7 of the '664 patent. See generally THG000030187-30254.

Holmes further reserves the right to supplement its response based upon West Bend's identification of any alleged points of novelty of the West Bend patents-in-suit in its response to Holmes' First Set of Interrogatories.

Interrogatory No. 15

Identify all Holmes slow cookers circular or oval in shape and made, made for, sold, or offered for sale by Holmes on or after November 28, 2000, and for each, state the date each was first sold or offered for sale, the date each was first presented to a person not then employed by Holmes, and the date each was first advertised or otherwise promoted in marketing or other materials.

Response to Interrogatory No. 15

Holmes objects to this interrogatory as unduly burdensome and not relevant to the issues in this case. Holmes further objects to this interrogatory to the extent that it seeks information protected by the attorney/client privilege and/or work product immunity. Holmes further objects to this interrogatory since West Bend has not formally identified any Holmes products alleged to infringe the West Bend patents-in-suit and Holmes did not receive notice of West Bend's patents-in-suit until service of West Bend's Answer and Counterclaims filed on August 24, 2005.

Subject to and without waiver of these objections and the General Objections, pursuant to Fed. R. Civ. P. 33(d), Holmes has produced non-privileged business records from which the information requested can be derived or ascertained. See generally THG000007996-8002.

Interrogatory No. 16

State whether Holmes intends to rely upon evidence of good faith reliance upon opinion of counsel in defense to the allegation that its alleged infringement of the West Bend Housewares patents-in-suit was willful and (a) identify all documents referring to or relating to any opinions of any counsel the subject of which is in whole or in part infringement or invalidity or unenforceability of the West Bend Housewares patents-in-suit; (b) identify all attorneys consulted on the subject of infringement, invalidity or unenforceability of the West Bend Housewares patents-in-suit and (c) identify all employees, agents or representatives of Holmes who consulted with attorneys on the subject of the West Bend Housewares patents-in-suit.

Response to Interrogatory No. 16

Holmes objects to this interrogatory to the extent that it seeks information protected by the attorney/client privilege and/or work product immunity. Holmes further objects to this interrogatory as being premature. At the appropriate time, should Holmes decide to rely upon opinion of counsel, pursuant to Fed. R. Civ. P. 33(d), Holmes has produced non-privileged business records from which the information requested can be derived or ascertained.

VERIFICATION OF ANSWERS

I, Timothy Gallogly, Esq., an authorized agent of JCS/THG, LLC d/b/a The Holmes Group ("Holmes") declare that I have read the foregoing answers on behalf of Holmes, that I have read the foregoing answers and subscribe to the same on behalf of Holmes, that said answers were prepared with assistance and advice of counsel and other representatives of Holmes, that said answers, subject to inadvertent or undiscovered errors, are based on, and therefore, limited by the records and information still in existence, presently recollected and thus far discovered in the course of preparation of these answers; that consequently, Holmes reserves the right to make changes in the answers if it appears at any time that omissions or errors have been made therein or that more accurate information is available; and that subject to the limitations set forth herein, that said answers are true to the best of my knowledge, information and belief.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct. Executed on June ____, 2006.

JCS/THG, LLC d/b/a
THE HOLMES GROUP

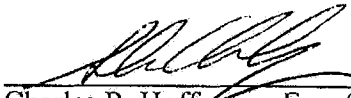
By: _____
Name: Timothy Gallogly, Esq.
Title: Vice-President and
Associate General Counsel

The undersigned subscribes to the foregoing objections.

Respectfully submitted,

JCS/THG, LLC d/b/a
THE HOLMES GROUP
By its Attorneys,

Dated: May 25, 2006



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CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing HOLMES' SECOND SUPPLEMENTAL RESPONSE TO WEST BEND'S FIRST SET OF INTERROGATORIES has been served via e-mail, this 25th day of May, 2006 upon the following:

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Glenn T. Henneberger

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS**

THE HOLMES GROUP, INC.,	:	
	:	
Plaintiff,	:	Civil Action No. 05-CV-11367 REK
v.	:	(Alexander, M.J.)
	:	
WEST BEND HOUSEWARES, LLC and	:	
FOCUS PRODUCTS GROUP, L.L.C.,	:	
	:	
Defendants.	:	

**EXHIBIT A TO HOLMES' FIRST SUPPLEMENTAL
RESPONSE TO WEST BEND'S FIRST SET OF INTERROGATORIES**

U.S. PATENT NO. 6,573,483 B1

<u>Claim 13</u>	<u>West Bend Programmable Slow-Cooker</u>	<u>Literal/DOE</u>
13. A method of using a programmable slow-cooker appliance, the method comprising:		
providing a food item;	Operating the West Bend's programmable slow-cooker includes the step of providing a food item.	literal
placing the food item into a cooking unit of the slow-cooker appliance;	Operating the West Bend's programmable slow-cooker includes the step of placing the food item into the cooking unit. (See Instruction Manual, p. 4.) ¹	literal
selecting a cooking temperature and time using a programmable controller mounted to a housing fixedly mounted to a heating unit; and	West Bend's programmable slow-cooker allows the user to select a cooking temperature and time using a programmable controller mounted to a housing, the housing being fixedly mounted to a heating unit. (See Instruction Manual, p. 4, program cooking, steps 1 and 2.)	literal
changing the heating unit temperature automatically to a lower temperature after the selected time.	The West Bend's programmable slow-cooker performs the step of automatically changing the heating unit temperature to a lower temperature after the expiration of the selected time. (See Instruction Manual, p. 4, program cooking, step 3.)	literal

¹ West Bend's Instruction Manual was attached as Exhibit C to Holmes' Complaint.

Claim 14

14. The method of claim 13, further comprising notifying a user with illuminated indicators that the slow-cooker appliance is powered and that the time is active.

West Bend Programmable Slow-Cooker

The West Bend programmable slow-cooker includes illuminated indicators in the form of a digital display and LED's to notify the user that the appliance is powered and that the time is active.

Literal/DOE

literal

Claim 17

17. The method of claim 13, wherein the temperature and time are set in increments.

The West Bend programmable slow-cooker temperature and time are set in increments. (See Instruction Manual, p. 4, program cooking, steps 2 and 3.)

literal

Claim 19

19. The method of claim 13, further comprising emitting a sound.

West Bend's programmable slow-cooker emits a sound. (See Instruction Manual, p. 5, Helpful Hints, bullet #3.)

literal

U.S. PATENT NO. 6,740,855 B1

<u>Claim 20</u>	<u>West Bend Programmable Slow-Cooker</u>	<u>Literal/DOE</u>
20. A programmable slow-cooker appliance comprising:		
a heating unit including a bottom and a continuous sidewall extending from said bottom, said bottom and said continuous sidewall defining a well-like chamber, said continuous sidewall including an outer sidewall and an interior sidewall;	West Bend's programmable slow-cooker includes a heating unit (10) having a bottom (15) and a continuous sidewall (17) extending from the bottom to define a well-like chamber.	literal
a heating element mounted to said heating unit and disposed between said outer sidewall and said interior sidewall;	West Bend's programmable slow-cooker includes a heating element mounted to the heating unit and positioned between an outer sidewall and interior sidewall.	literal
a housing fixedly mounted to and projecting outside said continuous sidewall of said heating unit;	West Bend's programmable slow-cooker includes a plastic housing (30) in the shape of half an oval fixedly mounted to and projecting outside the sidewall (17) of the heating unit (10).	literal
a programmable circuit positioned within said housing and configured to automatically switch said heating element from a cook mode to a lower temperature warm mode at the end of a set cooking time;	West Bend's programmable slow-cooker includes a programmable circuit including a printed circuit board positioned within the housing (30) and configured to automatically switch the heating element from a cook mode to a lower temperature warm mode at the end of a set cooking time. (See Instruction Manual, p. 4, program cooking, step 3.)	literal
a control panel mounted to said housing and including a user interface connected to said programmable circuit for selecting a cooking temperature and cooking time; and	West Bend's programmable slow-cooker includes a control panel on the front face of the housing and including a digital display and push-buttons thereon (42) mounted to the housing and having a user interface in the form of push-buttons connected to the programmable circuit for selecting a cooking time and temperature. (See Instruction Manual, p. 4, steps 1 and 2.)	literal
a cooking unit removably positioned in said well-like chamber.	West Bend's programmable slow-cooker includes a cooking unit (20) removably positioned in the well-like chamber.	literal

Claim 24**West Bend Programmable Slow-Cooker****Literal/DOE**

24. A programmable slow-cooker appliance as described in claim 20 wherein said housing is comprised of a thermoplastic material and said cooking unit is comprised of a ceramic material, said cooking unit being removably positioned in said well-like chamber.

West Bend's programmable slow-cooker includes a housing (30) made of a thermoplastic material and a cooking unit (20) made of ceramic, the cooking unit being removably positioned in the well-like chamber.

literal

Claim 26

25. A programmable slow-cooker appliance as described in claim 20 wherein said programmable circuit is configured such that a user cannot initially set a lower temperature warm mode.

West Bend's programmable slow-cooker includes a programmable circuit such that the warm mode cannot be initially set as a programmed temperature. (See Instruction Manual, p. 4, program cooking, step 1.)

literal

Claim 27

27. A programmable slow-cooker appliance as described in claim 20 including a switch operatively associated with said control panel, said programmable circuit being configured such that subsequent pushes of said switch activates different cook modes.

West Bend's programmable slow-cooker includes a switch on the control panel such that subsequent pushes of the switch sets different cook modes. (See Instruction Manual, p. 4, program cooking, step 1.)

literal

Claim 29

29. A programmable slow-cooker appliance as described in claim 20 wherein said housing includes a thermoplastic portion adjoining and extending into said continuous sidewall of said heating unit.

West Bend's programmable slow-cooker includes a housing (30) having a thermoplastic portion which extends into the sidewall (17) of the heating unit (10).

literal

EXHIBIT D



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER OF PATENTS AND TRADEMARKS
 Washington, D.C. 20231
 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/802,174	03/08/2001	James E. DeCobert	10367/1913	5948

757 7590 12/05/2001
 BRINKS HOFER GILSON & LIONE
 P.O. BOX 10395
 CHICAGO, IL 60610

EXAMINER

PASCHALL, MARK H

ART UNIT

PAPER NUMBER

3742

DATE MAILED: 12/05/2001

Please find below and/or attached an Office communication concerning this application or proceeding.


**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

 Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
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EXAMINER

ART UNIT	PAPER NUMBER
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6

DATE MAILED:

 This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS
OFFICE ACTION SUMMARY

- ☐ Responsive to communication(s) filed on _____
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

- ☒ Claim(s) 1-19 is/are pending in the application.
- Of the above, claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-19 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claims _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
- ☐ received.
- ☐ received in Application No. (Series Code/Serial Number) _____
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

- ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- ☒ Notice of Reference Cited, PTO-892
- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 4
- ☐ Interview Summary, PTO-413
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152

SEE OFFICE ACTION ON THE FOLLOWING PAGES -

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-7,9,11,12,13 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Rivelli et al.

Note slots 24 in cover 15 which allow for cooling of the controller.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was

made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 8,10 and 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rivelli et al in view of Yung. Rivelli et al teach the claimed subject matter except for showing use of the claimed time and temperature ranges and use of a digital display. However, as set forth in Yung it is conventional to use digital readout and it is considered obvious to choose appropriate temperature ranges and cooking times.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Halva , UK 091' and Baker are cited for disclosing pertinent heating control systems. .

Any inquiry concerning this communication or earlier communications from the examiner should be directed to M.. H. Paschall whose telephone number is (703) 308-1642.

mp

December 2, 2001

M H Paschall
Mark Paschall
Primary Examiner

Notice of References Cited		Application No. 41802174	Applicant DeCobert et al			
		Examiner Radwell	Group Art Unit 3742	Page 1 of 1		
U.S. PATENT DOCUMENTS						
*	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	
A	5910265	6-1999	Baker et al	219	434	
B	6274847	8-2001	Hlava et al	219	433	
C	6196113	3-2001	Yung	99	327	
D	3964852	9-1975	Rivelli et al	219	442	
E						
F						
G						
H						
I						
J						
K						
L						
M						
FOREIGN PATENT DOCUMENTS						
*	DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS	SUBCLASS
N	2061091	5-1981	UK	_____	219	433
O						
P						
Q						
R						
S						
T						
NON-PATENT DOCUMENTS						
*	DOCUMENT (Including Author, Title, Source, and Pertinent Pages)				DATE	
U						
V						
W						
X						

* A copy of this reference is not being furnished with this Office action.
(See Manual of Patent Examining Procedure, Section 707.05(a).)



FORM PTO-1449	SERIAL NO. 09/802,174	CASE NO. 10367/1913
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT	FILING DATE March 8, 2001	GROUP ART UNIT 1761
(use several sheets if necessary) APPLICANT(S):		

REFERENCE DESIGNATION		U.S. PATENT DOCUMENTS				
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS/ SUBCLASS	FILING DATE
W	A1	4,313,051	01/26/82	Aoshima		
	A2	4,345,145	08/17/82	Norwood		
	A3	4,551,590	11/05/85	Mahon		
	A4	4,566,802	01/28/86	Koehler		
	A5	4,668,878	05/26/87	Wyss		
	A6	4,674,890	06/23/87	Kojima et al.		
	A7	4,695,683	09/22/87	Wingler et al.		
	A8	4,695,710	09/22/87	Yamashita et al.		
	A9	4,749,874	06/07/88	Melsner et al.		
	A10	4,764,715	08/16/88	Kowalewski et al.		
	A11	4,789,761	12/06/88	Malone et al.		
	A12	4,835,349	05/30/89	Weber		
	A13	4,841,496	06/20/89	Adams et al.		
	A14	4,857,758	08/15/89	Rigazio et al.		
	A15	4,959,512	09/25/90	Cole et al.		
	A16	5,191,231	03/02/93	Berry		
	A17	5,430,598	07/04/95	Rodolfo et al.		
	A18	5,596,552	01/21/97	Lim		
	A19	5,815,604	04/01/97	Chenglin		
W	A20	5,771,207	06/23/98	Muroi et al.		
	A21	5,834,718	11/10/98	Amonett		
	A22					

FOREIGN PATENT DOCUMENTS						
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS/ SUBCLASS	TRANSLATION YES NO
	A23					
	A24					
	A25					
	A26					
	A27					

EXAMINER INITIAL	OTHER ART (Including Author, Title, Date, Pertinent Pages, etc.)
A28	
A29	

EXAMINER	Mark Paschall Primary Examiner	DATE CONSIDERED	11/30/01
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Attachment for PTO-948 (Rev. 03/01, or earlier)
6/18/01

The below text replaces the pre-printed text under the heading, "Information on How to Effect Drawing Changes," on the back of the PTO-948 (Rev. 03/01, or earlier) form.

INFORMATION ON HOW TO EFFECT DRAWING CHANGES

1. Correction of Informalities -- 37 CFR 1.85

New corrected drawings must be filed with the changes incorporated therein. Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and centered within the top margin. If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings **MUST** be filed within the **THREE MONTH** shortened statutory period set for reply in the Notice of Allowability. Extensions of time may **NOT** be obtained under the provisions of 37 CFR 1.136(a) or (b) for filing the corrected drawings after the mailing of a Notice of Allowability. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

2. Corrections other than Informalities Noted by Draftsperson on form PTO-948.

All changes to the drawings, other than informalities noted by the Draftsperson, **MUST** be made in the same manner as above except that, normally, a highlighted (preferably red ink) sketch of the changes to be incorporated into the new drawings **MUST** be approved by the examiner before the application will be allowed. No changes will be permitted to be made other than correction of informalities, unless the examiner has approved the proposed changes.

Timing of Corrections

Applicant is required to submit the drawing corrections within the time period set in the attached Office communication. See 37 CFR 1.85(a).

Failure to take corrective action within the set period will result in **ABANDONMENT** of the application.

EXHIBIT E

United States Patent [19]

Rivelli et al.

[11] 3,904,852

[45] **Sept. 9, 1975**

- | | | | | | |
|------|---|-----------|--------|--------------------|----------|
| [54] | DEEP FAT FRYING COOKING CONTROL MODULE | 3,720,155 | 3/1973 | Fritzsche..... | 99/337 |
| | | 3,787,594 | 1/1974 | Palmason..... | 99/403 X |
| [75] | Inventors: Louis E. Rivelli, Shelton; Miles J. Barnes, Woodbridge, both of Conn. | 3,824,373 | 7/1974 | Napier..... | 219/494 |
| | | 3,828,163 | 8/1974 | Amagami et al..... | 219/413 |

- [73] Assignee: **Food Automation-Service
Techniques, Inc., Stratford, Conn.**

Primary Examiner—Volodymyr Y. Mayewsky
Attorney, Agent, or Firm—Haynes N. Johnson

- [22] Filed: **Feb. 3, 1975**

- [21] Appl. No.: 546,501

- [52] **U.S. Cl.** **219/442**; 99/333; 99/403;
219/435; 219/494
[51] **Int. Cl.**² **F27D 11/02**
[58] **Field of Search** 219/412, 413, 425, 435,
219/436, 437, 438, 441, 442, 494; 99/331,
332, 333, 403

[56] **References Cited**

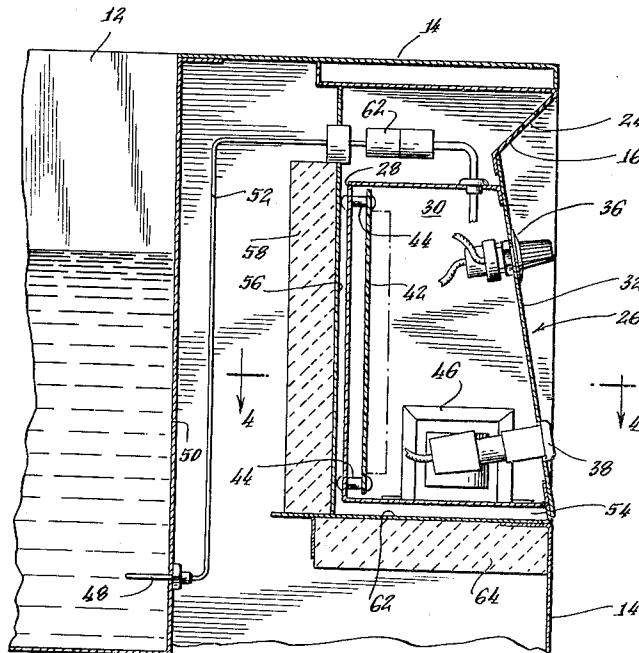
UNITED STATES PATENTS

- | | | | |
|-----------|--------|----------------|---------|
| 2,805,314 | 9/1957 | Michaelis..... | 219/437 |
|-----------|--------|----------------|---------|

[57] **ABSTRACT**

A deep fat frying cooking system includes a solid state deep fat frying cooking timing control computer directly within the cooker console. The heat sensitive computer circuitry is positioned within a dead air compartment located behind the front panel of the cooker console aiding convenience of operation. The timing control computer is provided as a modular unit which may be easily mounted in the panel and conveniently removed for necessary replacement and/or repair.

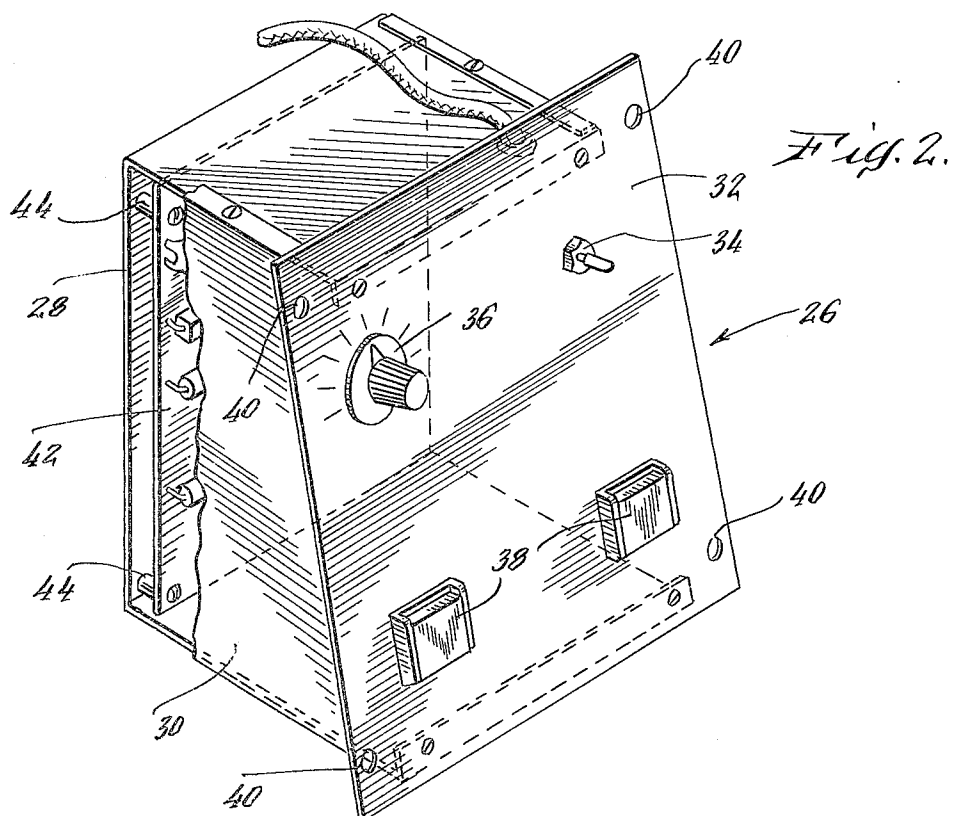
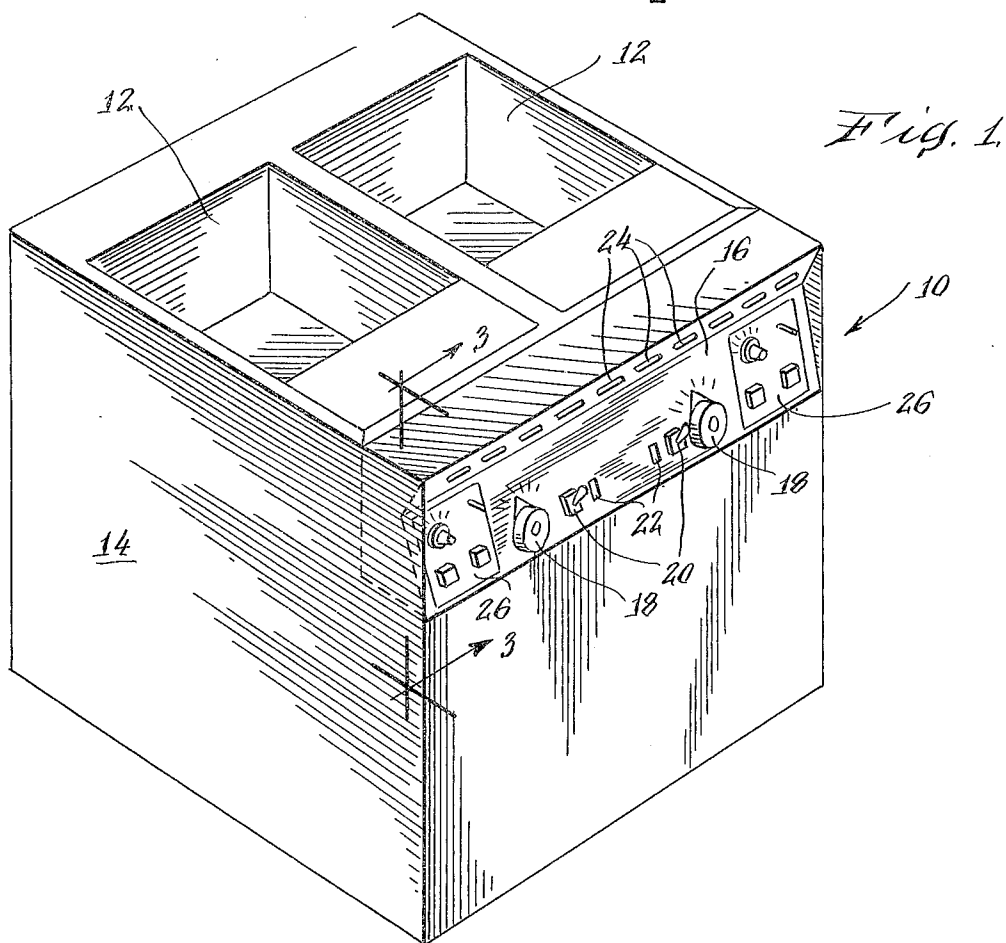
4 Claims, 4 Drawing Figures



PATENTED SEP 9 1975

3,904,852

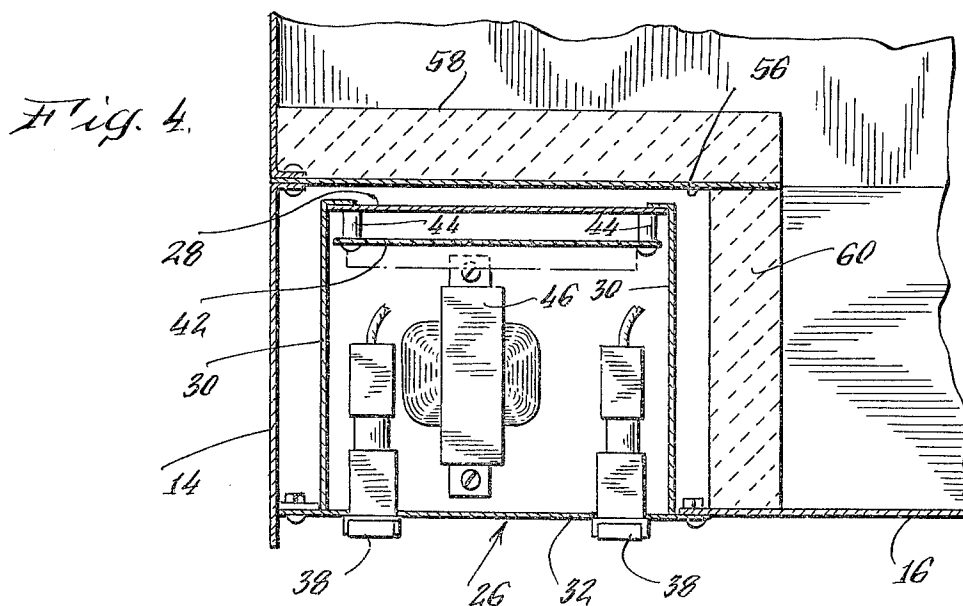
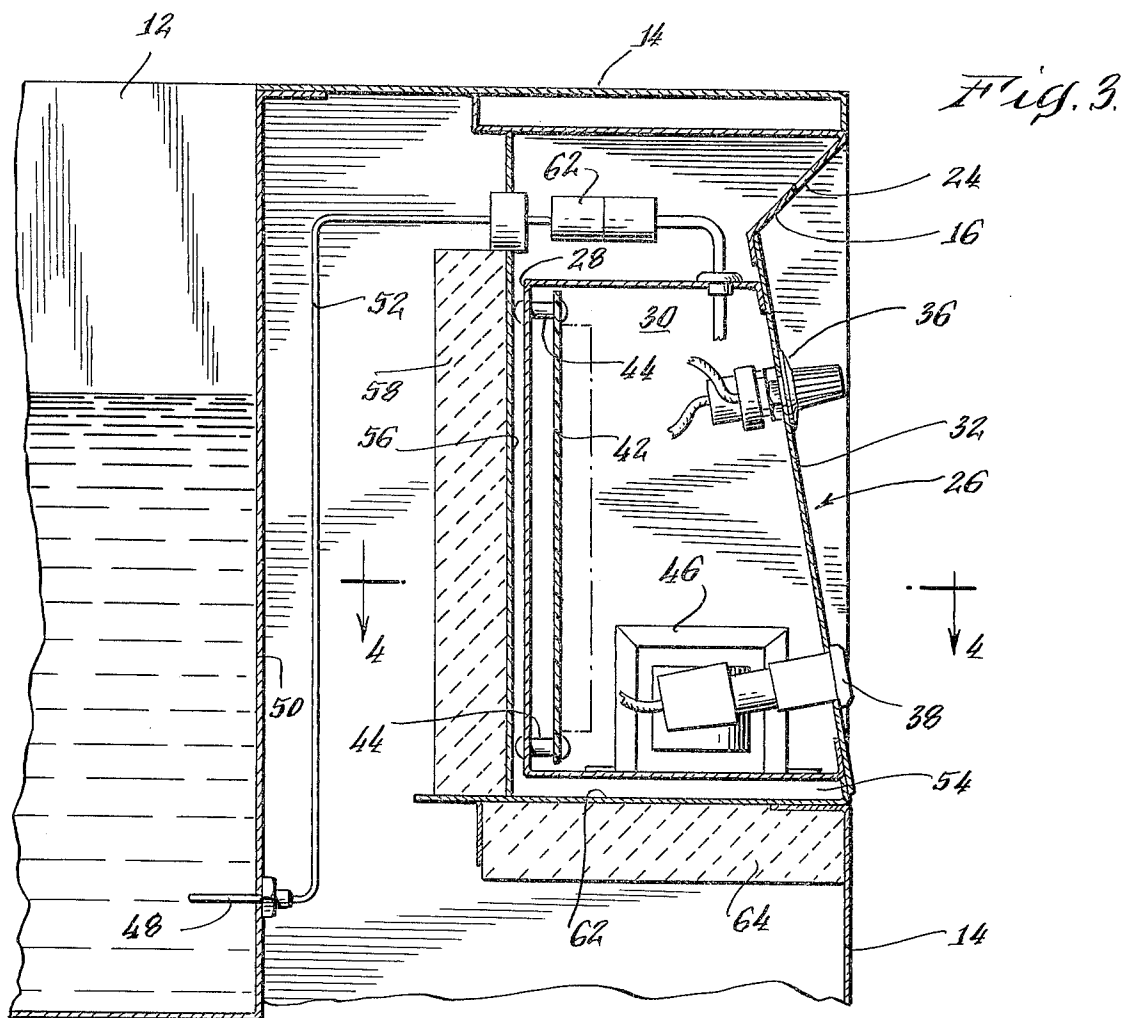
SHEET 1 OF 2



PATENTED SEP 9 1975

3,904,852

SHEET 2 OF 2



3,904,852

DEEP FAT FRYING COOKING CONTROL MODULE

BACKGROUND OF THE INVENTION

This invention relates to deep fat frying cooking systems and more particularly to such systems utilizing programmed control of the cooking process to achieve reproducible predetermined cooked product characteristics.

Deep fat frying cooking is widely used in restaurants and similar commercial food establishments and has found increasing popularity in fast food operations where it is utilized for the preparation of food products such as french fries, onion rings, fish sticks and the like. Perhaps the most significant criteria to be met in preparing such foods, aside from taste, is the degree of "doneness" which in the case of deep fat fried food can be recognized as crispness of product. The degree of "doneness" or crispness that is desired by the consuming public frequently varies from one geographical location to another. However, within one location, particularly within a single food outlet, it is desirable to maintain a consistent average standard of degree of "doneness" or crispness and thus quality control becomes essential.

Deep fat frying cooking is a function of heat transfer in that a given amount of heat transfer will produce a known change in the food product. Thus, it is possible to measure "doneness" or crispness by measuring the amount of heat transferred to the product. Ideally, given the same amount of food product in the same condition and the same amount of heat transfer during each cooking cycle, cooking could be regulated according to a fixed time. In actuality, however, these conditions do not exist since the product varies from unit to unit to a degree and, therefore, the proper cooking time varies also. Generally, the individual responsible for cooking determines the degree of "doneness" or crispness of a product, such as french fries, by tasting, feeling and observing the appearance of the product. This is somewhat subjective and disadvantageous, especially within a fast food outlet where the personnel vary from employment shift to shift or if there is a turnover of personnel.

To overcome the aforementioned disadvantages, a deep fat frying cooking control to achieve product consistency has been provided. Such a device, available under the trademark (FASTRON), is a solid state cooking computer for fried food products such as french fries and the like manufactured by Food Automation Service Techniques Incorporated. Such a cooking computer provides crisp control by computing the proper cooking cycle for french fries regardless of such variables as cooking oil temperature, potato temperature, potato solids content, potato size or cut, inconsistent blanching, batch size and employee experience. The solid state cooking computer is factory programmed to cook the potato to the desired average degree of "doneness" or crispness by timing the cooking cycle.

The solid state cooking computer has generally been located in a control unit mounted near the deep fat fryer cooker. A probe, set in the base of the fryer kettle or well connects the control components contained in a sealed cabinet to the fryer kettle. The solid state timing controls themselves are maintained separated from

the deep fat fryer cooking console because of the high heat generated by the cooking kettles and transferred to the surrounding air and housing enclosing them. If the solid state components are subjected to temperatures much above 158°F a danger exists that the solid state controls would be adversely affected. Thus, the timing controls have always been provided in a separate unit apart from the cooker console housing to avoid the deleterious effects of the high temperatures involved although the simple controls for the cooker, such as on-off and temperature variation controls, have been mounted within the cooker console itself since these are not temperature sensitive. It would be beneficial to convenience of use and packaging of equipment and related controls to be able to provide such solid state timing controls for regulating the degree of product "doneness" or crispness directly within the cooker console itself.

SUMMARY OF THE INVENTION

The present invention overcomes the drawbacks associated with the need for providing the solid state cooking computer controls in a unit separate from the deep fat fryer cooker console itself, facilitates operation of the computer activation controls by the chef and provides economy of manufacture in making available a more efficient cooker console which directly incorporates the timing controls. The foregoing is achieved, according to the invention, by providing a dead air space compartment, within the cooker console housing, in which the temperature is maintained below that temperature which would be deleterious to the solid state timing components.

Thus, while the cooker console housing interior heats up, and convection flow of air therein and to the outside is permitted for cooling, the dead air space compartment contains no convection flow of air and is sealed from the housing interior avoiding the temperatures therein. The compartment is advantageously provided on the front panel of the cooker console which contains the other frying kettle controls which are not temperature sensitive. The computer controls can be placed directly within the panel as a modular unit with the probe passing directly to any wall of the cooking kettle for measuring the necessary oil characteristics. Since the cooking computer is located within the front panel adjacent to the other controls it is convenient to operate, and, being a module located in the front of the console, may be readily removed for replacement and/or repair if necessary.

Thus, it is a feature of this invention to provide cooking timing controls directly within the console housing the deep fat fryer cooker. It is a further feature of this invention to provide a means within the console housing deep fat fryer cookers wherein temperature sensitive electric and electronic elements may be mounted free from the deleterious effect of high temperatures normally present within the console housing. Another feature of this invention is the provision of a modular deep fat fryer cooking control unit for mounting in the cooker console.

BRIEF DESCRIPTION OF THE DRAWINGS

The aforementioned advantages and features of this invention will become more apparent from the following description of the invention taken in conjunction with the accompanying drawings in which:

3

4

FIG. 1 is a top front perspective view of a deep fat frying cooker console showing the cooking timing control module positioned in the front panel thereof in accordance with an embodiment of the invention;

FIG. 2 is a top front perspective view of a cooking timing control module according to an embodiment of this invention;

FIG. 3 is a side view, partly in section, of the timing control module, showing its position within the cooker console, taken along line 3—3 of FIG. 1; and

FIG. 4 is a top view, in section, of the timing control module, taken along the line 4—4 of FIG. 3.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

FIG. 1 illustrates a typical deep fat fryer cooking system having a cooker console 10 such as may be obtained commercially under the tradename FRYMASTER. The cooker console 10 includes deep fat frying kettles or wells 12 surrounded by an enclosure housing 14. Associated with the cooker console may be racks for supporting the frying baskets out of the cooking oil and similar known appurtenances which are not relevant to the present invention and need not be shown. The cooker console 10 has a panel, indicated generally at 16, mounted within the front of the housing 14 and spaced a distance from the front walls of the frying kettles 12.

The panel 16 carries kettle temperature variation controls 18 for regulating the temperature of the cooking oil within the kettle, on-off switches 20 and indicator lights 22. The panel 16 may also carry protective circuitry for the deep fat fryer cooker which functions as a safety switch to shut down the unit if the oil or shortening temperature reaches a dangerously high temperature, around 400°F. The panel 16 also contains slotted openings 24 along its upper edge which serve to release warm air within the housing which has been heated due to the high operating temperatures of the kettles 12.

Mounted within the panel 16 are solid state cooking timing controls or computer modules 26, shown in greater detail in FIG. 2. Referring to FIG. 2, it is seen that the computer module 26 comprises a chassis 28 to which are attached side covers 30 and a front panel face plate 32. The front panel 32 carries a test switch 34 which may be left in "operate" position or positioned to test the control probe or the solid state controls. An adjustable dial control 36 enables the user to select the degree of crispness control for reproducible crispness of the food fried in the kettle 12. The cook cycle starting and stopping switches are shown at 38. The front panel face plate 32 contains openings 40 utilized to fasten the computer module 26 in the panel 16 of the cooker console 10.

The interior of the computer module 26 includes those components which form the circuit for cooking timing control. Referring to FIG. 3, it can be seen that printed circuit board 42 is spaced from the chassis 28 by means of spacing bolts 44. This aids in reducing conducted heat flow to the board from the module and provides a space for cooling air flow if desired. The specific details of the electrical circuitry components need not be described for the purposes of this invention, it being sufficient to point out that they are all contained within the computer module 26 for convenient insertion into the panel 16. A separable connection, such as

the coupling 62, permits quick connection and disconnection of the module circuitry to the control probe. Thus, the computer module includes the electrical and electronic components on the printed circuit board 42, the switches such as 36 and 38 and various other components, such as transformer 46, mounted therein. A probe 48, positioned in any side 50 of the cooking kettle 12, senses the characteristics of the oil in the kettle and transmits a signal representative of the same to the computer module 26 via the line represented at 52.

FIGS. 3 and 4 show the manner in which the computer module 26 is mounted within a compartment 54 situated between the panel 16 and the front side 50 of the frying kettle 12. The compartment 54 is mounted on the side nearest the front side of the cooking kettle and separated therefrom by means of a rear wall 56 having insulation means 58 thereon. The two side walls of the compartment 54 are defined by the outer wall of the housing 14 and an opposite compartment wall defined by insulation means 60 which is firmly affixed to the panel 16 and the rear wall 56. A compartment floor or bottom wall 62 also carries insulation means 64 which cooperates with the other insulation means described to provide thermal shielding for the compartment from the hot air within the housing 14.

The compartment 54 is thus closed off from the interior chamber of the cooker console 10 defined by the housing 14 and communicates with the exterior of the console only through the slotted openings 24. Thus, the compartment 54 defines a dead air space through which no air is circulating. In contrast, however, air circulates within the interior of the housing 14 due to convection currents arising from the heat of the frying kettles 12. This air circulates and exits from the cooling slots 24 in the panel 16. The temperature of this circulating air may be as high as 250°F in the region of the panel 16. Such a temperature would be harmful to solid state components, such as those in the timing control circuit, which are highly temperature sensitive.

However, according to this invention, insulation is provided which retards heat transfer from the air flow in the region immediately adjacent to the compartment 54, containing the computer module 26. Consequently, the air in the compartment is kept cooler, below about 158°F. In addition, the computer module 26 is mounted within the dead air space in the compartment 54 and is spaced from the sides of the compartment, at least approximately one quarter of an inch, to avoid any heat conduction flow due to contact between the module 26 and the walls of the housing 14. The only contact is between the front panel face plate 32 of the module 26 and the panel 16 of the cooker console 10. Although this front panel 16 may be warm, it is much cooler than the convection air within the housing 14, being designed to be at least under 160°F, since such is the temperature considered the maximum that a human can touch momentarily without being burned. Thus, dead air surrounds the five sides of the computer module unit 26 while the front panel is exposed to the ambient room air.

Heretofore, it was not believed that solid state components of such a computer could be located directly within the cooker console 10. The components used in such circuitry generally have an operational rating of approximately 158°F. The problems of temperature sensitivity overcome by this invention also make possible the insertion of the probe 48, for the control of the

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cooking time, directly through the front wall 50 of the kettle 12. Thus, the computer module 26 itself is most conveniently mounted on the panel 16 within the housing 14 of the cooker console 10 in close proximity thereto.

The computer solid state components themselves generate little heat. Nevertheless, if desired, the side covers 30 can be provided with openings so that the interior of the module 26 can communicate with the compartment 54. The location of the computer module 26 on the front panel 16 facilitates its convenience for operation. The chef need merely push the cook cycle start switch 38 each time one or more baskets of food to be fried are set in the frying kettle 12. When done according to the previously selected degree of done-ness selected by control 36, a buzzer, which is part of the computer circuitry, sounds and/or another signal, such as a light, is provided. The food is then removed and the cycle switch once again pushed to quiet the buzzer and/or extinguish the light.

By providing the cooking timing control computer in a module such as 26, it can be readily installed in the panel 16 and can be easily removed for repair or replacement. This also reduces the risk of having to run wires externally to connect the probe to a computer unit located at a position distant from the cooker console 10 and the frying kettle 12 and thus increases safety.

We claim:

1. In a deep fat fryer cooking system including a deep fat frying kettle and heating means for heating the same, a housing substantially enclosing the bottom and four sides of the kettle and having a panel in proximity to a side of the kettle, the panel carrying kettle on-off and temperature controls and the like, the improvement of a heat sensitive solid state electrical circuitry deep fat frying cooking timing control computer module located in the panel, comprising:

a chamber defined essentially by the frying kettle, the panel and the housing,

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the chamber being adapted to provide convection air flow for cooling of the frying kettle, a thermally insulated compartment within the chamber,

the compartment being sealed from communication with the chamber so as to define a dead air space therein,

the temperature of the air within the chamber being above that temperature having a deleterious effect on the solid state electrical components of the computer,

the temperature of the air within the compartment being below that temperature having a deleterious effect on the solid state electrical components of the computer, and

the computer module being positioned within the compartment.

2. The improvement as claimed in claim 1 wherein: one wall of the compartment is formed by the panel, the other walls defining the compartment are positioned within the chamber, and

the computer module is mounted in the panel and the compartment maintained spaced from the walls of the compartment positioned within the chamber so as to minimize the likelihood of conduction heat flow to the module from the chamber.

3. The improvement as claimed in claim 2 wherein: a sensing probe means for sensing the characteristics of the frying oil is connected to the computer module, and

the probe means is inserted in the wall of the frying kettle most proximate to the compartment containing the computer module.

4. The improvement as claimed in claim 2 wherein: the heat sensitive solid state components of the computer are located on a board-like support means, and

the support means is positioned within the computer module spaced from the walls of the module.

* * * * *

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EXHIBIT F

US006196113B1

(12) **United States Patent**
Yung(10) **Patent No.:** **US 6,196,113 B1**
(45) **Date of Patent:** **Mar. 6, 2001**(54) **FOOD APPLIANCE AND A CODING SYSTEM THEREFOR**(76) Inventor: **Simon K. C. Yung**, 6 Purves Road,
Jardine's Lookout (HK)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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Related U.S. Application Data

(60) Division of application No. 09/061,296, filed on Apr. 16, 1998, now Pat. No. 5,967,021, which is a continuation-in-part of application No. 08/915,654, filed on Aug. 21, 1997, now Pat. No. 5,794,521, which is a continuation of application No. 08/346,432, filed on Nov. 29, 1994, now Pat. No. 5,704,277.

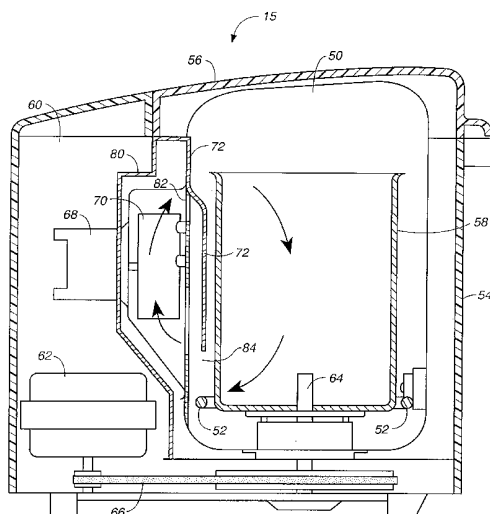
(51) **Int. Cl.**⁷ **A21B 1/00**; A21D 8/00;
A47J 27/00; A47J 37/01(52) **U.S. Cl.** **99/327**; 99/348; 99/468;
366/144; 366/146; 366/314(58) **Field of Search** 99/325-335, 348,
99/467, 468, 483, 484, 486; 366/69, 96-98,
144-146, 149, 341, 314, 601; 426/504,
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Primary Examiner—Timothy Simone(74) *Attorney, Agent, or Firm*—Majestic, Parsons, Stebert & Hsue P.C.(57) **ABSTRACT**

A versatile food appliance includes a set of hardware components common to a plurality of single-purpose food appliances. The set of hardware components is controlled by a microcontroller executing a program from a repertoire thereof stored in the general-purpose food appliance. Many processing programs are stored for operating the appliance in different modes and for processing different kinds of food by using different ingredients. Each processing program is assigned a code and can be selected by specifying the code associated with it from a control panel. The programs may be further modified parametrically by a group of process parameters. Ingredients to be used in each of the programs may be in a premixed form in a package with the code optionally labeled thereon. The repertoire of programs is updatable by the user. In the preferred embodiment, a memory card interface allows updated programs to be introduced via a removable flash memory card.

31 Claims, 7 Drawing Sheets

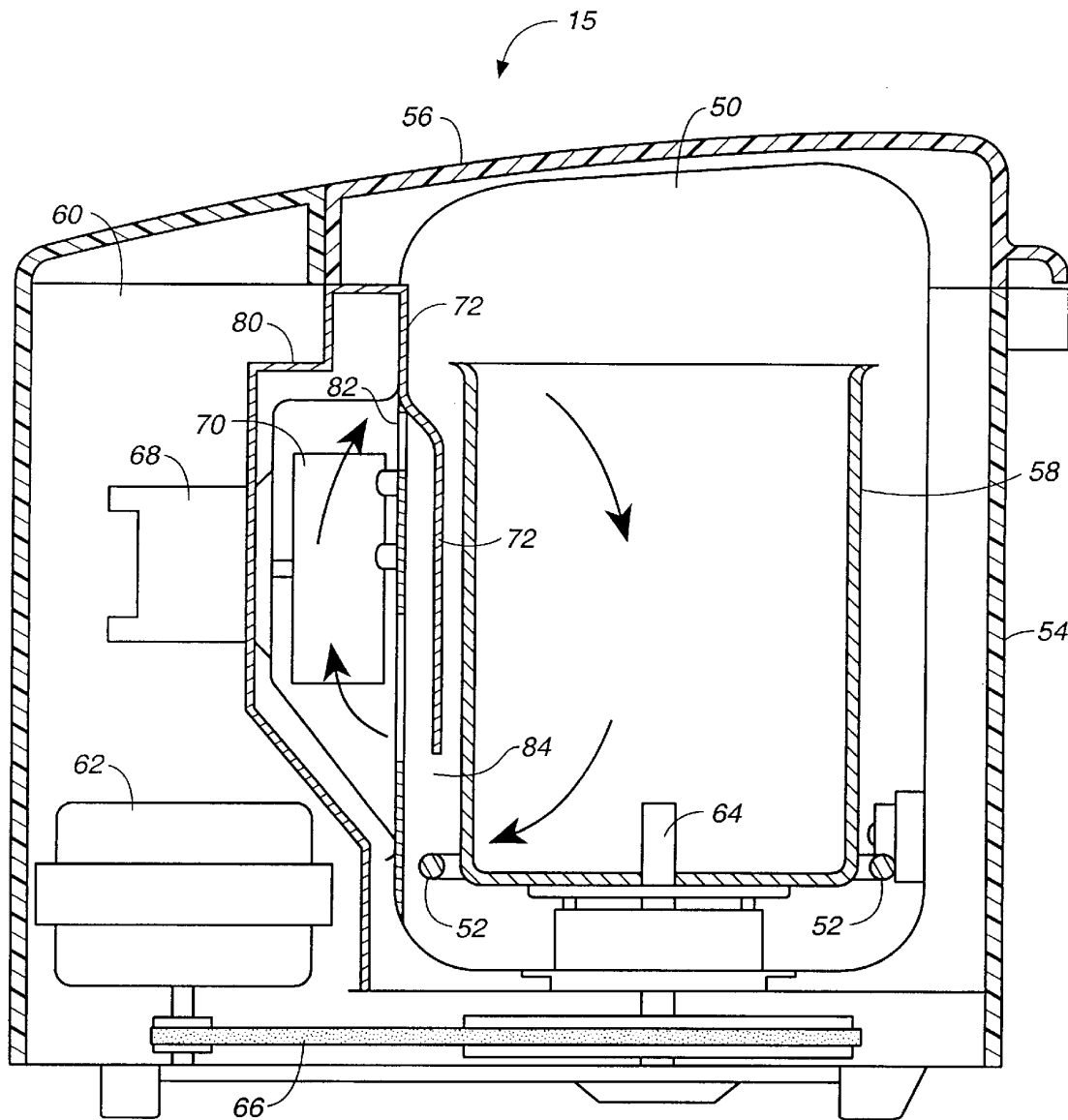


FIG. 1

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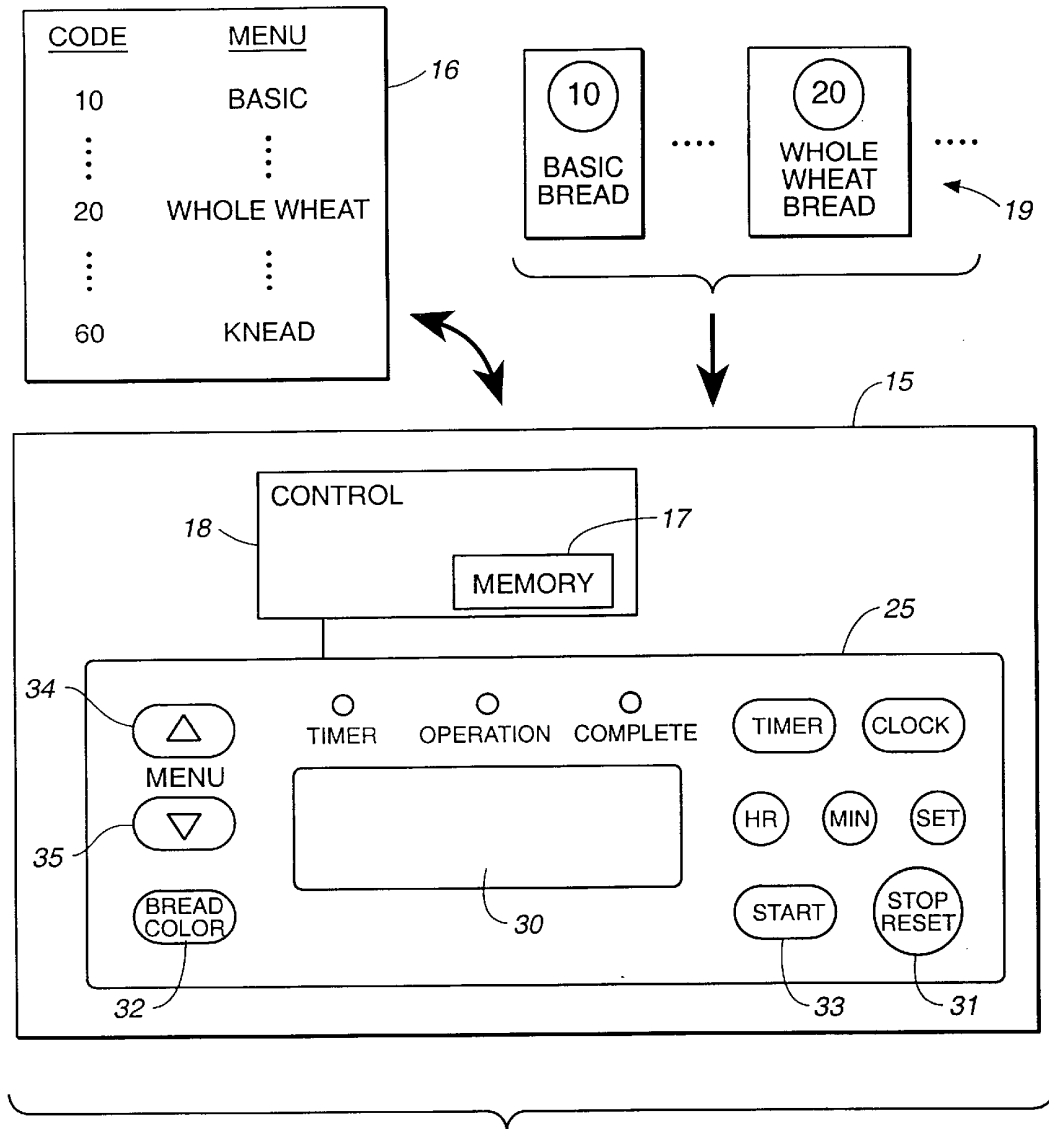


FIG._2

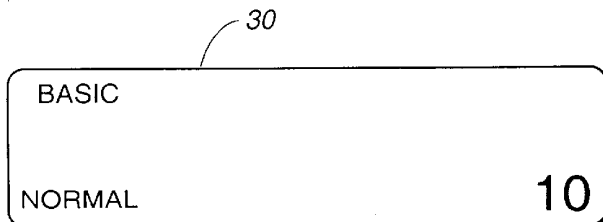


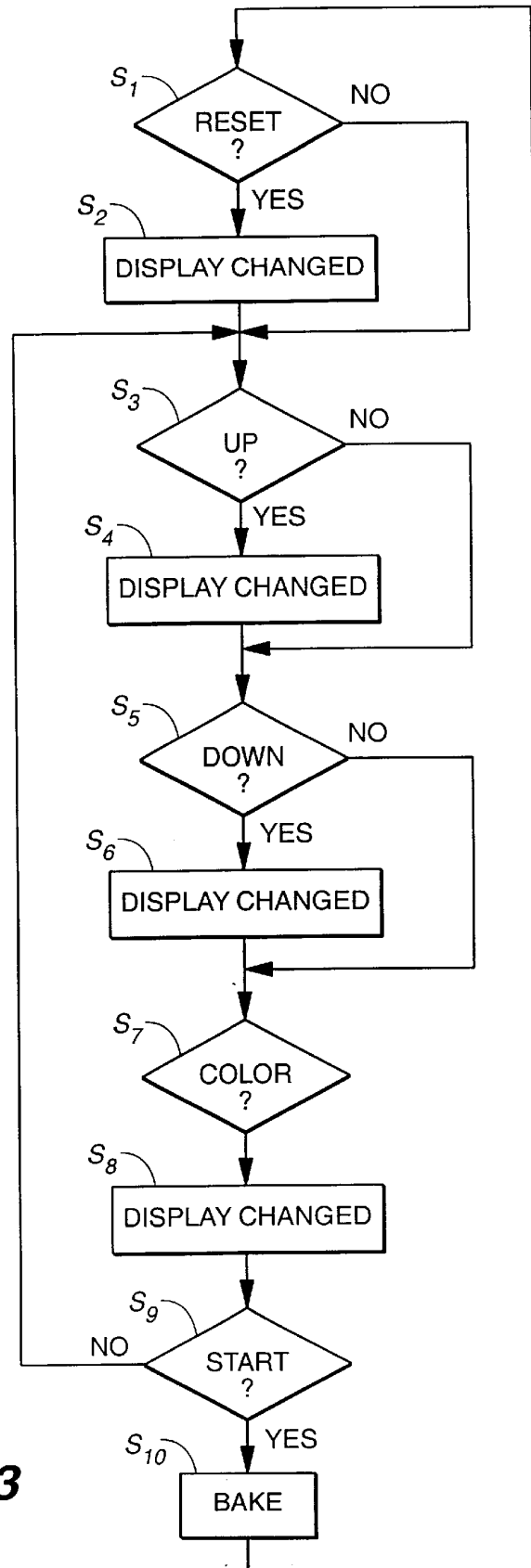
FIG._4

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**FIG. 3**

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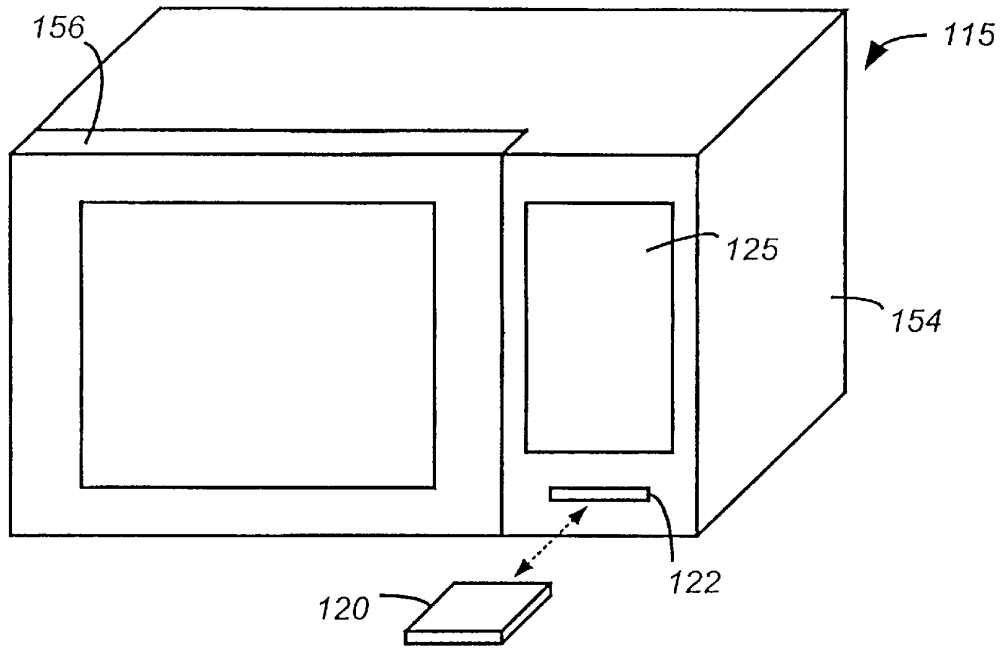


FIG._5A

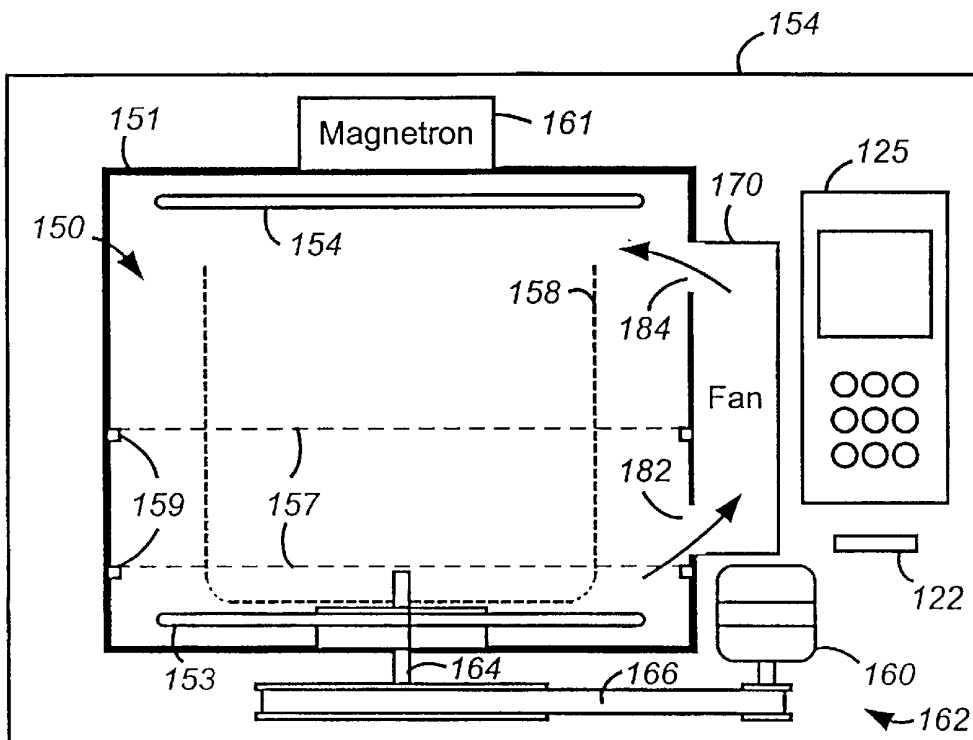


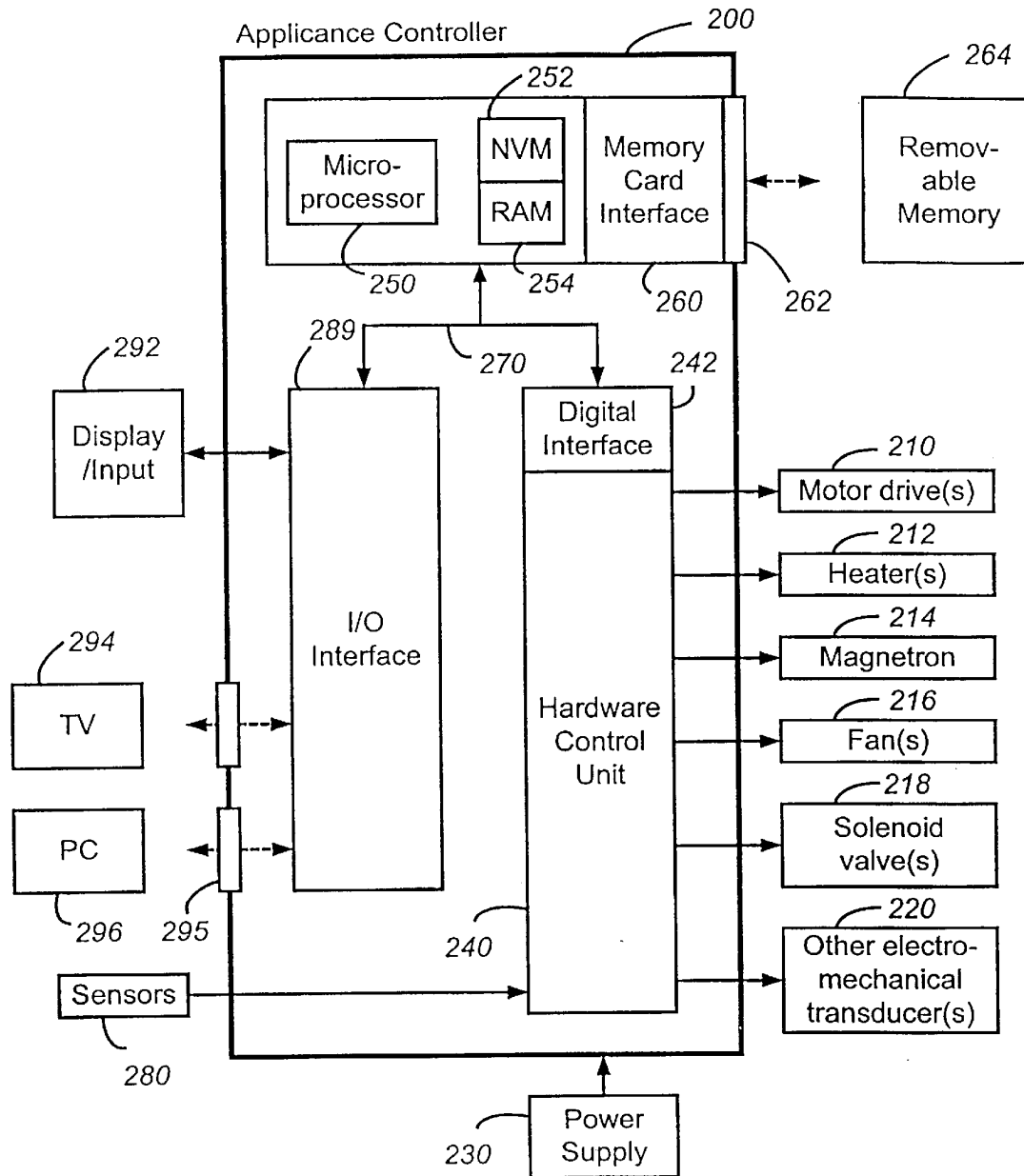
FIG._5B

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**FIG. 6**

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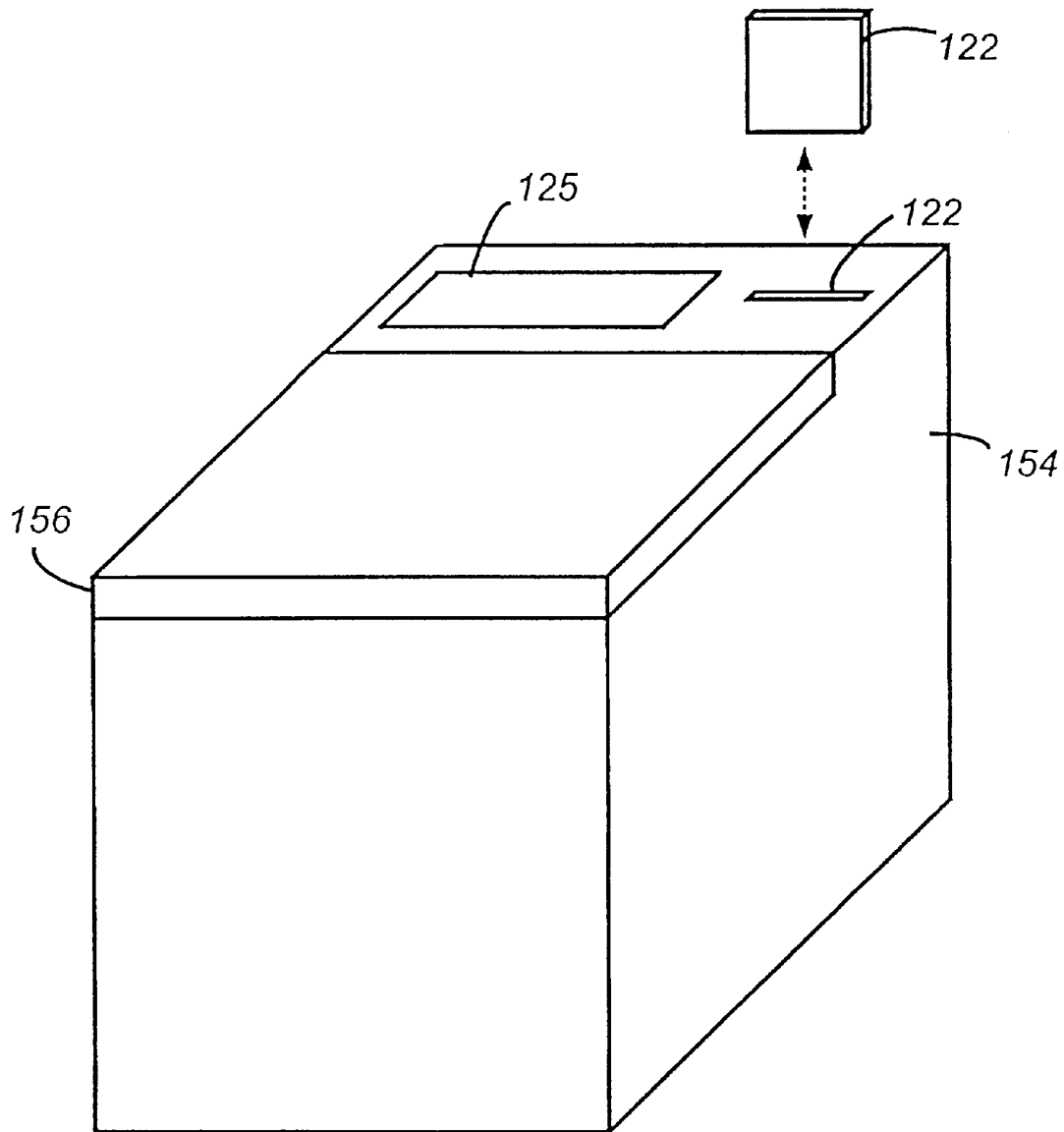


FIG. 7

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Parameter Code	Process Parameter Configuration	Description	...
520	(5, 120, 20, ...)	Light	...
.	.	.	.
.	.	.	.
.	.	.	.
530	(5, 130, 20, ...)	Medium	...
.	.	.	.
.	.	.	.
.	.	.	.
540	(5, 140, 20, ...)	Brown	...
.	.	.	.
.	.	.	.
.	.	.	.

FIG._8

16'

<u>CODE</u>	<u>MENU</u>
10520	BASIC - Light
10530	BASIC - Medium
10540	BASIC - Brown
.	.
.	.
.	.
20520	WHOLE WHEAT - Light
.	.
.	.
.	.
60430	KNEAD
.	.

FIG._9

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**FOOD APPLIANCE AND A CODING SYSTEM
THEREFOR**

This is a division of U.S. patent application Ser. No. 09/061,296, filed Apr. 16, 1998, now U.S. Pat. No. 5,967, 021, which is a continuation-in-part of U.S. patent application Ser. No. 08/915,654, filed Aug. 21, 1997, now U.S. Pat. No. 5,794,521 which is a continuation of U.S. patent application Ser. No. 08/346,432, filed Nov. 29, 1994, now U.S. Pat. No. 5,704,277.

FIELD OF INVENTION

This invention relates to an improved food appliance and, more particular, to a versatile food appliance having a coding system for program-control and including features for program updates that can be effected by an end-user.

BACKGROUND OF THE INVENTION

One embodiment of a food appliance in the form of a breadmaker with coding system has been disclosed in U.S. Pat. No. 5,704,277. The program-controlled machine operates according to one of a plurality of provided specified programs by receiving materials required in the specified program such as ingredients of a selected kind of bread to be baked.

Breadmakers of the type comprising a baking chamber containing an electric heater at the bottom, a baking pan which is a container to be set inside the baking chamber for receiving ingredients therein, a stirrer for stirring and kneading the ingredients inside the baking pan and a motor for rotating the stirrer in a specified manner, have been known.

Breadmakers of the type storing a plurality of programs and allowing a user to select one of them for baking a desired kind of bread have also been known. These programs generally include many complicated steps such as mixing selected ingredients and controlling the baking temperature. With some prior art breadmakers, the user is required to read a cookbook carefully to ascertain the necessary steps before setting an appropriate program.

Some breadmakers are preprogrammed, and the user has only to specify the desired kind of bread to be baked, the breadmaker automatically carrying out the program associated with the specified kind of bread.

For allowing the user to specify the kind of bread to be baked, some breadmakers are designed to display, as power is switched on, the types of bread that can be specified. An indicator is initially displayed at a default position, say, next to the name of the most commonly selected kind of bread, and the user operates a SELECT button until the indicator moves one position at a time to finally reach a position next to the desired kind of bread.

Alternatively, the breadmaker may be provided with as many push buttons as the number of different kinds of bread that can be baked thereby, and the user is required to push the button corresponding to the desired kind of bread. With prior art breadmakers, therefore, the number of programs from which the user can select one is limited because the screen of the display device is not large and the control panel of the machine cannot accommodate too many buttons.

With prior art breadmakers, furthermore, the user must carefully add the required ingredients such as flour, sugar, salt and yeast. In other words, prior art breadmakers are not energy-efficient and are difficult to use and the choice of different kinds of bread that can be baked thereby cannot be increased significantly.

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Prior art breadmakers and other program-controlled appliances have a limited set of preset programs that can be operated. That is, the repertoire of programs that can be executed by a breadmaker or a similar appliance is fixed at the factory. If a new recipe calls for a different process, the user can at best approximate it by selecting the closest existing preset program. In most cases, the user will have to purchase newer models of the machine in order to have the newer features and processes.

Furthermore, prior art food processing machines tend to be task-specific and single-purpose. For example, a breadmaker is dedicated to making bread, a rice cooker for cooking rice, a rotisserie for roasting, a regular oven or a microwave oven or a convection oven for either general-purpose or specific kind of baking, toasting and broiling, etc.

SUMMARY OF THE INVENTION

It is a general object of the invention to provide a versatile food appliance with updatable program control for replacing a plurality of dedicated appliances.

It is another object of the invention to provide a food appliance with a coding system in which a new recipe or a premixed package of ingredients can be associated with a predefined program.

It is another object of the invention to provide a food appliance having a repertoire of programs capable of being updated in the field by a user.

It is another object of the invention to provide a new coding system for a program-controlled machine such as a breadmaker or other food appliance which allows a user to select one from a larger number of different kind of products and to cause the machine to operate automatically on a program appropriate for the selected product.

It is still another object of the invention to provide such a coding system with which the user is less likely to make an error in providing ingredients for the specified product.

It is still another object of the invention to provide a versatile food appliance capable of operating as a breadmaker or other dedicated machine and which is equipped with such an improved coding system.

It is still another object of the invention to provide a food appliance which can efficiently store a large number of programs.

An improved breadmaker embodying the present invention, with which the above and other objects can be achieved, may be characterized as being like a prior art breadmaker comprising a baking chamber having a heater therein, a baking pan adapted to receive ingredients therein and be set inside the baking chamber, a stirrer for stirring and kneading the ingredient inside the baking pan and a motor for rotating the stirrer in a specified manner, and also comprising an air-circulating means such as a centrifugal fan for causing the air inside the baking chamber to move upward through the fan and to circulate downward around the baking pan.

A coding system embodying the invention, with which the above and other objects can be accomplished, may be characterized as being associated with a machine adapted to carry out selectively any of a plurality of tasks according to a program and by using specific materials both associated with the selected task. An example of such machines is a breadmaker programmed to make different kinds of bread by using different mixtures of ingredients. Each of the products that can be obtained by such a machine is assigned a different code, and a table, serving as an indexing means, is

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provided to show what code has been assigned to each of the products that can be made or processed by the machine, and a user specifies the product to be obtained or processed by inputting the corresponding code. The materials to be used by the machine for making a product of the specified kind or carrying out a specified process may be provided in the form of a premixed package with the corresponding code clearly printed thereon such that the user is spared of the trouble of mixing the required ingredients himself/herself. The user may specify the code corresponding to the desired product by directly forming it on numeric or alphanumeric keys, or by causing available codes to appear sequentially on a display device one by one and pressing a process-starting button when the code corresponding to the desired product or process is displayed.

One feature of the invention allows a food appliance to run additional new programs outside its existing repertoire. This is accomplished by providing facility for a user to transfer new programs to the food appliance.

In one embodiment, the new programs or updates are transferred via a standard data port, such as a parallel port, or a serial port, or an infrared port provided with the food appliance.

In another embodiment, the new programs or updates are transferred via a memory port which is able to receive a removable memory card.

Another feature of the invention incorporates multiple functions into a versatile appliance operating under the control of programs which are updatable. In this way, one versatile machine or appliance can replace several dedicated machines. This is accomplished by incorporating in the versatile appliance the hardware components common to a plurality of dedicated food machines.

An economy of scale is achieved since the different dedicated food machines have many components in common. When only the common denominators of these components are included in the versatile food appliance, duplication is avoided.

Another advantage is that with the multiple function capability of the food appliance, there exists synergy and sophistication of processing that are not possible in conventional dedicated appliances. Since the versatile food appliance is capable of a rich set of functionalities, it is particularly useful to provide the facility for programs updates even after the food appliance leaves the factory.

Another feature of the invention is to provide a food appliance running programs that allow portions thereof to be modified by a group of parameters. This is accomplished by having the program execution responsive to a group of process parameters. In this way, the repertoire of the food appliance may be greatly increased without having inefficiently to store many similar programs which may only differ in some minor respect.

In one embodiment, a code from the coding system described above is used to identify a given program operating with a given set of values assigned to an associated group of process parameters.

In another embodiment, a set of predetermined permutations of values for the process parameters (i.e., a set of process parameter configurations) are coded. In this way, a user need only enter a program code to call up a desired program and enter a parameter code to specify a desired process parameter configuration from the predetermined set.

In another embodiment, the group of process parameters can be specified by a user by entering a desired value for

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each process parameter. For example, all things being equal, the user can modify the duration or temperature of one or more cycles of the program.

The accompanying drawings, which are incorporated in and form a part of this specification, illustrate embodiments of the invention and, together with the description, serve to explain the principles of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a sectional side view of a breadmaker embodying the present invention;

FIG. 2 is a schematic of a coding system embodying the invention as incorporated in a breadmaker;

FIG. 3 is a flow chart of the operation by the control means for the coding system of FIG. 2;

FIG. 4 is an example of display on the display device of FIG. 2 after reset;

FIG. 5A illustrates one embodiment of the versatile food appliance with removable memory;

FIG. 5B is a sectional view of the embodiment shown in FIG. 5A;

FIG. 6 is a schematic block diagram of the versatile food appliance, according to a preferred embodiment of the invention;

FIG. 7 illustrates another embodiment of the versatile food appliance with removable memory;

FIG. 8 illustrates schematically an example lookup table for process parameter configurations; and

FIG. 9 illustrates a table where a single code represents one combination of a parametric program and a process parameter configuration, according to a preferred embodiment.

DETAILED DESCRIPTION OF THE INVENTION

FIG. 1 shows a breadmaker 15 embodying the present invention, including components which are commonly known with reference to prior art breadmakers of a similar type. A baking chamber 50 containing an electric heater 52 near the bottom is formed inside a housing structure 54. The housing structure 54 is provided with a lid 56 which can be opened such that a baking pan 58 for receiving bread ingredients therein can be removably set inside the baking chamber 50. Adjacent to but separated by a chamber-separating wall 80 from the baking chamber 50 inside the housing structure 54, there is a motor chamber 60 containing a stirrer motor 62, of which the drive shaft is in motion-communicating relationship with a stirrer drive shaft 64 through a belt 66 such that stirrer blades (not shown) attached to the stirrer drive shaft 64 for stirring, kneading and mixing the contents of the baking pan 58 can be rotated in a specified manner, such as alternately in the clockwise and counter-clockwise directions, by activating the stirrer motor 62 in a controlled manner.

The motor chamber 60 further contains therein a fan motor 68 for a centrifugal fan 70 which is inside the baking chamber 50 but is separated from the baking pan 58 by a partition wall 72. The partition wall 72 has upper windows 82 above the centrifugal fan 70 and a lower inlet 84 below the centrifugal fan 70 such that, when the fan motor 68 activates the centrifugal fan 70, the air which has been heated by the heater 52 is forced upward therethrough as shown by upwardly pointing arrows in FIG. 1 through the space between the partition wall 72 and the chamber-

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separating wall separating the baking chamber 50 from the motor chamber 60. The upwardly pushed hot air is forced to pass through the upper windows 82 towards the baking pan 58, flows downward around the baking pan 58 as shown by downwardly pointing arrow in FIG. 1 and is then sucked through the lower inlet 84 towards the centrifugal fan 70. Thus, the heated air inside the baking chamber 50 is caused to circulate therein as shown by the arrows in FIG. 1 around the baking pan 58, instead of becoming discharged out of the baking chamber 50 as was the situation with prior art breadmakers of this type. As a result, heat is more efficiently utilized through convection by a breadmaker embodying the present invention such that up to 2.0 lbs of wheat bread and up to 2.5 lbs of white bread can be baked with the amount of energy required to bake about 1.5 lbs of bread by a prior art bread maker of a comparable design. Because the forced air circulation according to the present invention has the favorable effect of making temperature distribution uniform through the baking pan 58, furthermore, tastier bread with improved texture can be obtained.

A coding system according to the present invention will be described next as applied to a breadmaker such as the one described above with reference to FIG. 1, but it is applicable equally well to many other kinds of program-controlled machines adapted to operate according to any one of a plurality of programs which may each be associated with a different kind of product such as bread by receiving materials such as ingredients required in the selected program.

FIG. 2 shows the breadmaker 15 schematically, as incorporating a coding system according to this invention, including a table 16, a memory device 17 which stores many programs and may be considered a part of a central processing unit 18 serving as control means for controlling the general operation of the breadmaker 15 as a whole by following any of these programs, and a control panel 25 provided with a display device 30 such as a liquid crystal display and many switches and buttons as input devices including a STOP/RESET button 31, a COLOR button 32 for choosing between normal and light bread coloring, and a START button 33 for starting a cycle of baking operations according to a selected program. An important feature of the invention is that the kinds of bread which can be baked or the processes which can be carried out by the breadmaker 15 are each assigned a code, which is preferably numeric, but may also be alphabetic or alphanumeric. As a practical example, numerical codes "10", "20" and "60" are assigned to represent not only "basic bread", "whole wheat bread" and a process of "kneading", respectively, but also the corresponding programs stored in the memory device 17 and intended to be called through the control means 18 to control the operation of the breadmaker 15 for baking basic bread, baking whole wheat bread and carrying out a predefined kneading process, respectively.

The table 16 is for showing to a user what code has been assigned to each kind of bread or process that can be selected, for example, by listing in one column all the codes which can be specified and in another column the kinds of bread and processes corresponding to the codes in the first column.

According to a preferred method of using the coding system described above, ingredients to be used for making each kind of bread listed in the table 16 are made available in a premixed form in a package as schematically shown at 19. Each package is clearly marked with the code representing the kind of bread to be baked or process to be carried out, that is, the program to be followed by the control means 18. This method is advantageous because the possibility of

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making errors by the user can be reduced when ingredients are poured into the baking pan 58 of the breadmaker 15, and the user is spared of the trouble of preparing a required mixture of ingredients.

Next, the process of selecting a kind of bread to be baked or a process to be carried out and specifying it by a code to the control means 18 will be described with reference to the flow chart of FIG. 3 as well as the schematic of FIG. 2.

According to most practical embodiments of the invention, the program which is used most frequently, or believed to be used most frequently, is treated as the default program. Since the basic kind of bread with normal coloring is usually selected most frequently, the program for baking the basic bread is defined as the default program such that, when the STOP/RESET button 31 is pressed to reset the control means 18 (YES in Step S1), the code "10" corresponding to BASIC BREAD is automatically selected. Thus, after a reset, the display on the display device 30 will be as shown in FIG. 4 (Step S2).

The control panel 25 is provided with an UP button 34 and a DOWN button 35 for changing the specified-program. The codes which are assigned to different kinds of bread and processes are arranged in a sequence (in an ascending order, for example, if the codes are numeric) such that, whenever the UP button 34 or the DOWN button 35 is pressed (YES in Step S3 or S5), the control means 18 selects the program corresponding to the next code in the sequence in the forward or backward direction, respectively, and causes the new code corresponding to the newly selected program to be displayed on the display device 30, as well as the name of the corresponding kind of bread or process selected (Step S4 or S6). Similarly, if the COLOR button is pressed (YES in Step S7), the selected color changes from normal to light or from light to normal, and the display on the display device 30 also changes from NORMAL to LIGHT, or from LIGHT to NORMAL (Step S8). When one of the codes and the bread color (normal or light) have been selected and the START button 33 is pressed (YES in Step S9), the control means 18 begins to operate the breadmaker 15 according to the selected one of the stored programs (Step S10).

As shown in FIG. 2, the control panel 25 is further provided with a timer button (TIMER) for entering the timer setting mode of operation to set a timer (not shown), a clock button (CLOCK) for entering the clock setting mode of operation to set a clock (not shown), an hour button (HR) and a minute button (MIN) for respectively setting the hour and the minute in the timer and clock setting modes, and a set button (SET) for setting the timer or the clock, as well as light emitting diodes marked TIMER, OPERATION and COMPLETE to show respectively that the control is in the timer setting mode, that the baking operation is going on and that the baking operation has been completed. These and similar kinds of buttons and diodes have been in use with prior art breadmakers, and their functions are well known by the users.

Thus, they are illustrated in FIG. 2 but will not be described in any detail herein.

The present invention was described above with reference to only a few examples. These examples are intended to be merely illustrative, however, and not limitative. Many modifications and variations are possible on the disclosed examples. For example, the coding system of the present invention need not relate to a breadmaker, or more generally to a food machine, but also to any program-controlled machine allowing a user to select one of a plurality of programs and operating on such a selected program by using

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a special material associated with the program. A particular coding method was illustrated above, but the codes need not necessarily be arranged in a sequence such that they appear in the display device one by one in that sequence, either in the forward or backward direction, to allow the user to decide whether or not to select the one of the choices being displayed. The control panel may be provided with numeric keys, or alphanumeric keys, to allow the user to form a numeric or alphanumeric code to directly call a desired program.

Versatile Appliance Having Updatable Programs

The coding system described above allows individual programs from a repertoire thereof previously preset into a machine to be efficiently identified and accessed. The other advantage is when a premixed package of food ingredients is labeled with an appropriate code, the user can conveniently call up the correct process in the machine by simply entering the code.

However, even with a large repertoire of programs preset into the machine at the time of manufacture, there may be occasions when a user may want to use a new recipe or a new premixed package of food ingredients that requires a new program not found in the existing repertoire of the machine.

One feature of the invention allows a machine or appliance to run additional new programs outside its existing repertoire. This is accomplished by providing facility for a user to transfer new programs to the appliance.

Another feature of the invention incorporates multiple functions into a versatile appliance operating under the control of programs which are updatable. In this way, one versatile machine or appliance can replace several dedicated machines.

FIG. 5A illustrates one embodiment of the versatile food appliance 115 with removable memory. This embodiment has a housing 154 with a front-opening door 156. The housing encloses a food processing chamber which is accessible through the opened door. On the housing is a control panel 125 with display through which a user can interact with the food appliance 115. In this example, the versatile food appliance is able to function as a toaster oven, a microwave oven and a breadmaker.

FIG. 5B is a sectional view of the embodiment shown in FIG. 5A. A chamber 150 is formed inside the housing structure 154. Inside the chamber is a pair of top and bottom electric heating elements 153, 155. Shelves or racks 157 are removably mounted in the chamber for supporting food to be processed. The shelves are resting on supports 159 on the chamber walls. By selectively powering either top or bottom or both heating elements 153, 155, the appliance can be made to function much like a toaster oven.

Adjacent to but separated by a chamber wall 180 from the chamber 150 inside the housing structure 154 is a motor chamber 160. The motor chamber contains a centrifugal fan 170. The centrifugal fan 170 draws air from the chamber through an inlet 182 near a bottom opening of the chamber wall 180 and blows it back into the chamber through an outlet 184 near a top opening of the chamber wall 180. When the centrifugal fan 170 is operating in combination with the heating elements 153, 159 the food appliance is functioning as a convention oven.

Between the top wall 151 of the chamber and the housing structure is optionally a magnetron 161 for providing a microwave source which is emanating into the chamber via a port from the top wall 151. The motor chamber 160 further contains a drive motor 162, of which the motor shift is in motion-communicating relationship, by means of a drive

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belt 166, with a drive shaft 164 extending into the chamber through the bottom chamber wall. A turntable is removably mounted on the drive shaft, such as food placed on the turntable can be rotated in a specified manner, by activating the drive motor 162 in a controlled manner. When the magnetron operates in combination with the turntable, the food appliance is functioning as a microwave oven.

Alternatively, a bread pan 158 for receiving bread ingredients therein can be removably set inside the chamber 150, with a stirrer blade inside the bread pan engaged with the drive shaft 164. Thus, bread making ingredients received in the bread pan can be stirred, kneaded and mixed through the action of the stirrer blade driven by the drive shaft. In this way, the food appliance is functioning as a breadmaker.

It can be seen that the versatile food appliance is capable of operating like different dedicated food machines.

FIG. 6 is a schematic block diagram of the versatile food appliance, according to a preferred embodiment of the invention. Essentially, the versatile food appliance 115 comprises a plurality of hardware components controlled by an appliance controller 200.

The plurality of hardware components, depending on configurations, may include one or more motor drives 210. For example, in a microwave oven mode of operation, one of the motors is used to drive a turntable so that food supported thereon can get a more even microwave exposure. In a rotisserie mode of operation, one of the motor drives is used to rotate a rack so that food mounted thereon may be heated more evenly on all sides when exposed to localized heating elements. In a breadmaking mode of operation, one of the motor drives is used to turn a mixing and kneading blade inside a baking pan, as described in an earlier section.

Similarly, the plurality of hardware components, depending on configurations, may include one or more heater elements 212, such as the heater elements 153, 155 shown in FIG. 5B. These heater elements may be turned on individually or in combination in order to perform broiling, toasting, baking, self-cleaning etc.

When the food appliance includes a pan for receiving food ingredients, the heater elements enable it to operating in a slow cooking mode-similar to that of a crockpot. When the pan is partially filled with water and food is support above the water, the food appliance is able to operate as a steamer.

Similarly, the plurality of hardware components, depending on configurations, may include a magnetron 214, such as the magnetron 161 shown in FIG. 5B. In a microwave oven mode of operation, the magnetron is used to produce microwave heating in the chamber.

Similarly, the plurality of hardware components, depending on configurations, may include one or more fans 216, such as the centrifugal fan 170 shown in FIG. 5B. For example, in a convention oven mode or in a breadmaking mode of operation, the fan is used to circulate hot air in the chamber.

Similarly, the plurality of hardware components, depending on configurations, may include one or more solenoids 218. The solenoids are generally used to open or close valves or vents, and to actuate various mechanical contraptions.

Similarly, the plurality of hardware components, depending on configurations, may include other electromechanical transducer 220. U.S. Patent application, "Breadmaker With Improved Temperature and Humidity Control", filed on the same day as the present application, by Simon K. C. Yung, is incorporated herein by reference. The incorporated disclosure describes improved temperature and humidity control in which an ultrasonic humidifier is a component inside the breadmaking chamber.

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The plurality of hardware components is controlled by a hardware control unit **240**. A power supply **230** provides electric power to the plurality of hardware components under the control of the hardware control unit **240**. Although, FIG. 6 shows a number of specific hardware components, it will be understood that various hardware components are optionally implemented. Other hardware components not shown are also contemplated. On the other hand, not all shown hardware components need be implemented at the same time.

The intelligence of the appliance controller is provided by a microprocessor **250** executing codes and programs that are stored in a non-volatile memory (NVM) **252** and a random-access memory (RAM) **254**. The microprocessor, the NVM and the RAM are in communication with each other via a bus (not shown). In one embodiment, the NVM is in the form of a read-only memory (ROM). It stores firmware and a preset repertoire of programs that were initially shipped with the appliance. In another embodiment, the NVM is in the form of EEPROM or flash EEPROM memory which essentially provides rewritable mass storage. The RAM is typically used as a scratch patch memory when the microprocessor executes a program.

Another special feature of the present invention is the provision for updating the repertoire of programs in the appliance. This is accomplished by the ability to interchange data with the appliance controller.

In one embodiment, the new programs are transferred via a memory port which is able to receive a removable memory card that a user can plug into the appliance.

The appliance optionally includes a non-volatile memory interface **260** that interfaces with the microprocessor **250** on one hand and with a removable memory card **264** via a card connector **262** on the other hand. The memory card **264** is a non-volatile memory such as ROM, EPROM, EEPROM or preferably one of the standardized flash memory cards currently being introduced in other consumer products such as in digital still cameras, digital voice recorders and cellular, phones and handheld devices. Other possible non-volatile memories include magnetic and optical disks.

Since the removably memory cards are portable from host to host and are becoming standardized, they can be used to exchange data easily between a variety of hosts. For example, new or updated programs for the appliance may be created by the manufacturer or other developers and distributed on a ROM or flash memory card to the consumer. A new bread recipe embodied in a premixed package of ingredients may come with a new breadmaking program stored in a flash memory card or a floppy. In the latter case, the program on the floppy may be transferred to a flash card by means of a personal computer (PC). Alternatively, the programs could be downloaded from a website by the consumer and saved onto a flash card plugged into a PC. Then the flash card is moved to the general-purpose appliance to update or augment the existing programs therein.

In another embodiment, the updating of the repertoire of programs in the appliance is accomplished via a standard data port **295**, such as a parallel port or a serial port or an infrared port provided on the food appliance.

The microprocessor **250** is in communication with the hardware control unit **240** via a digital interface **242** coupled to an internal bus **270** of the Appliance controller. The digital interface **242** provides conversions between analog and digital signals and enables the microprocessor to control the hardware control unit **240**.

One or more sensors **280** provide detection of various conditions associated with the operation of the appliance.

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The signals from such sensors are received into the hardware control unit **240**. In one embodiment, the signals are fed into a local servo circuit which is used directly to control some of the plurality of hardware components. In another embodiment, the signals are made available via the digital interface on the internal bus **270**. The microprocessor **250** is then able to monitor the sensor signals and take appropriate actions accordingly.

An input/output (I/O) interface **290** is also in communication with the microprocessor **250** via the internal bus **270**. The I/O interface allows one or more peripheral devices to interact with the appliance controller **200** and more particularly with the microprocessor **250**. In the preferred embodiment, one such peripheral device is a display and input unit **292** such as the control panel **190** shown in FIG. 5B.

In another embodiment, the peripheral devices are externally connectable to the appliance and include a television **294** which can be used to display multimedia information. For example, a premixed package of ingredients may include a memory card that, given sufficient memory, stores a program for running the appliance plus a multimedia file which is a video clip giving cooking instructions for the particular package.

In another embodiment the peripheral devices externally connectable to the appliance include a personal computer **296** which is preferably connected via the standard interface **295** which is either a parallel port or a serial port to the I/O interface **290**. This allows for multimedia files to be played back as well as for even more flexible exchange of data and control.

FIG. 7 illustrates another embodiment of the versatile food appliance **115** with removable memory. This embodiment is essentially similar to that shown in FIG. 5A except it has a taller form factor. It has a housing **154** with a top-opening door **156**. The housing encloses a food processing chamber which is accessible through the opened door. On the housing is a control panel **125** with display through which a user can interact with the food appliance **115**. The taller form factor lends itself to accept a baking pan with its long axis vertical and engaged to a vertical drive shift at the bottom of the chamber, much like that of a conventional breadmaker. When the appliance operates in rotisserie mode, the baking pan is replaced by a rotisserie rack engaged on the vertical drive shift. In this case, the heating element is preferably a line element running vertically along a wall of the chamber.

The improved food appliance may be a versatile, multi purpose food machine depending on the program it is running. Its basic functions can include radiant heating, microwave heating, mechanical mixing and turning, and combination thereof. For example, the improved food appliance is programmable to act as any number of standalone machines such as a breadmaker, various type of oven, a rice-cooker, among others. Although the food appliance has been described with a multitude of optional hardware components, not all components need be implemented at the same time. Similarly, even a number of peripheral devices are shown, not all peripheral connections need be implemented at the same time.

Coding System for Process Parameters

Another feature of the invention is to provide a food appliance that allows the process it is running to be modifiable by a group of parameters. Many of the processes run by a food appliance are similar and only differ in some portions of the process, the variation being definable by a group of process parameters. For example, two processes may differ by the duration or temperature in one cycle thereof.

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This feature of the invention is accomplished by setting up programs in parametric form where the parametric program executes its process responsive to a process parameter configuration, i.e., values assigned to a predetermined group of process parameters. In this way, the repertoire of the food appliance is greatly increased without having to store many similar programs.

In one embodiment, the process parameter configuration can be specified by a user by entering the values for each of the parameters directly via the food appliance input device. For example, the user can modify the duration or temperature of one or more cycles of the program. The input values are stored in a set of registers in the appliance controller. When a program is being executed by the food appliance, it references the registers to configure corresponding program variables.

In a preferred embodiment, the coding scheme described earlier for program identification and indexing can also be used to do the same for identifying and indexing any number of process parameter configurations. A lookup table in memory stores a plurality of process parameter configurations and their associated codes and indices.

FIG. 8 illustrates schematically an example lookup table 316 for process parameter configurations. A group of process parameters may be given by (cycle number, temperature, duration, . . .) A process parameter configuration is defined when all the parameters in the group are assigned definite values. A parameter code is assigned to each predetermined process parameter configurations. For example, the parameter code 520 is assigned to the process parameter configuration (5, 120, 20, . . .), the parameter code 540 to (5, 140, 20, . . .), etc. Thus, the parameter configuration lookup table 316 contains coded indexed entries of process parameter configurations. Each entry may optionally contain additional information associated with the configuration, such as a description of the configuration. Similar to the table 16 shown in FIG. 2, the additional information may be shown on the display of the food appliance for the user's convenience.

In this way, a desired process to run on the food appliance is selected when its associated parametric program is called up by its program code, and the associated process parameter configuration for the program is called up by its parameter code.

FIG. 9 illustrates a table 16' using a single code to represent one combination of a parametric program and a process parameter configuration, according to a preferred embodiment. The table 16' is similar in structure to the table 16 shown in FIG. 2. The single code may be formed by a concatenation of the program code and a parameter code.

In a system including a food appliance and a plurality of packaged ingredients, an appropriate code or set of codes may be marked on each package of ingredients, similar to what has been described earlier so that the same code may be entered into the food appliance to call up the appropriate program and process parameter configuration to process the ingredients.

While the embodiments of the various aspects of the present invention that have been described are the preferred implementations, those skilled in the art will understand that variation thereof may also be possible. The device and method described therein are applicable to a versatile food appliance that is capable of using updatable programs to operate the appliance in a variety of modes normally available individually through conventional dedicated food appliances. Therefore, the invention is entitled to protection within the full scope of the appended claims.

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It is claimed:

1. A food appliance, comprising:

a chamber for processing food therein;
one or more food processing functional units inside said chamber;
a controller for controlling operations of said one or more food processing functional units;
a first memory for storing a repertoire of preprogrammed processes;
an input for receiving input data into said food appliance, including data designating a preprogrammed process among said repertoire of preprogrammed processes;
control means for operating said controller according to the designated preprogrammed process; and
a port for updating said repertoire of preprogrammed processes with one or more additional preprogrammed processes.

2. A food appliance as in 1, wherein said one or more food processing functional units include a radiant heater.

3. A food appliance as in 1, wherein said one or more food processing functional units include a microwave heater.

4. A food appliance as in 1, wherein said one or more food processing functional units include a mechanical actuator.

5. A food appliance as in 1, wherein said port is a memory port connectable to a removable memory.

6. A food appliance as in 1, wherein said port is a data port connectable to a data source.

7. A food appliance as in 1, wherein said one or more additional preprogrammed processes are obtainable from said removable memory.

8. A food appliance as in 1, wherein said one or more additional preprogrammed processes are obtainable from a website.

9. A food appliance as in 5, wherein said removable memory includes read only memory.

10. A food appliance as in 5, wherein said removable memory includes EPROM.

11. A food appliance as in 5, wherein said removable memory includes EEPROM.

12. A food appliance as in 5, wherein said removable memory includes flash EEPROM.

13. A food appliance as in 5, wherein said removable memory includes a magnetic storage medium.

14. A food appliance as in 5, wherein said removable memory includes an optical storage medium.

15. A food appliance as in anyone of 1-14, further comprising:

a pan inside said chamber for receiving ingredients therein.

16. A food appliance as in anyone of 1-14, further comprising:

a rack inside said chamber for supporting the food being processed.

17. A food appliance as in anyone of 1-14, further comprising:

a magnetron for providing microwave heating in said chamber.

18. A food appliance as in anyone of 1-14, including a preprogrammed process that operates said food appliance in a baking mode.

19. A food appliance as in anyone of 1-14, including a preprogrammed process that operates said food appliance in a broiling mode.

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20. A food appliance as in anyone of 1-14, including a preprogrammed process that operates said food appliance in a toasting mode.

21. A food appliance as in anyone of 1-14, including a preprogrammed process that operates said food appliance in a microwave heating mode.

22. A food appliance as in anyone of 1-14, including a preprogrammed process operates said food appliance as a rotisserie.

23. A food appliance as in anyone of 1-14, including a preprogrammed process that operates said food appliance as a breadmaker.

24. A food appliance as in anyone of 1-14, including a preprogrammed process that operates said food appliance as a rice cooker.

25. A food appliance as in anyone of 1-14, including a preprogrammed process that operates said food appliance as a slow cooker.

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26. A food appliance as in anyone of 1-14, including a preprogrammed process that operates said food appliance as a steamer.

27. A food appliance as in anyone of 1-14, including a preprogrammed process that operates said food appliance in a high-heat, self-cleaning mode.

28. A food appliance as in anyone of 1-14, including an input/output interface for one or more peripheral devices to operate with the food appliance.

29. A food appliance as in 28, wherein said one or more peripheral devices include a multimedia system.

30. A food appliance as in 29, wherein said multimedia system include a personal computer.

31. A food appliance as in 29, wherein said multimedia system include a television.

* * * * *

EXHIBIT G



I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage, as first class mail in an envelope addressed to:

Commissioner for Patents
Washington, D.C. 20231
on February 12, 2002

Date of Deposit

David W. Okey

Name of applicants, assignee or
Registered Representative

David W. Okey

Signature

Feb 12, 2002

Date of Signature

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Our Case No. 10367/1913

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: DeCobert et al.

Serial No. 09/802,174

Filing Date: March 8, 2001

For: Programmable Slow Cooker
Appliance

)
)
) Examiner: Mark H. Paschall

)
) Group Art Unit No. 3742
)
)

RESPONSE TO OFFICE ACTION

Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

In response to the December 5, 2001 Office Action, Applicants submit this Response by certificate of mailing. Applicants respectfully request the Examiner to reconsider the application. Applicants request the Examiner to withdraw rejections for anticipation and for obviousness, and to grant the application in view of the following remarks.

REMARKS

1. Rejections under 35 U.S.C. § 102(b).

The Examiner has rejected Claims 1-7, 9, 11, 12 and 13 for anticipation by U.S. Pat No. 3,904,852, Rivelli et al. ("Rivelli"). The Examiner points to slots 24 in a top portion of Fig. 1 of Rivelli as allowing for cooling of the container. Rivelli discusses the slots at Col. 4, second full paragraph, lines 26-39. Rivelli states that with only the slotted openings 24, there is a dead air space with temperatures of up to 250° F surrounding the controls, including the solid state electronic components used in this controller. Rivelli overcomes this difficulty by providing thick insulation to retard heat transfer into control compartment 54 and computer module 26. Fig. 3 shows the insulation, thick insulating slabs 58 and 64, which insulate the control compartment 26, described in Rivelli's claims as "a thermally insulated compartment."

In contrast, the present invention uses slots in the top and bottom, see Fig. 5, slots which are, for example, depicted with numerals 242 (top) and 250 (bottom) to create a chimney effect, not a dead air space. Claim 1 states that the housing is designed to convect heat away from the controller, while Rivelli is clearly designed to insulate the controller from heat. Claim 11 claims these top and bottom openings specifically, which top and bottom openings are not present in Rivelli. Claims 2-7 and 9 depend from Claim 1. Claim 12 depends from Claim 11, and Claim 13 is a method of using this slow-cooker appliance.

Accordingly, Applicants believe the Examiner's rejection based on anticipation under 35 U.S.C. § 102(b) is overcome. Applicants respectfully request that the Examiner withdraw the rejections under 35 U.S.C. § 102(b) of Claims 1-7, 9, 11, 12, and 13 for anticipation.

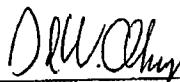
2. The Examiner rejected Claims 8, 10, and 14-19 under 35 U.S.C. § 103(a) as being obvious and unpatentable over Rivelli in view of U.S. Pat. No. 6,196,113, Simon Yung ("Yung"). As discussed above, Rivelli discloses an insulated, essentially dead-air space to house controls; Yung discloses an internal fan to control heat distribution, see Fig. 1, numeral 70 and arrows depicting convection. There is no disclosure concerning any special arrangement for the controller 125, as shown in Figs. 5A, 5B and 7.

Claims 8, 10, and 14-19 depend from Claims 1 or 13, and include all the limitations of their independent claim. The Applicants therefore believe the Examiner's rejection based on obviousness under 35 U.S.C. § 103(a) is overcome. Applicants respectfully request the

Examiner to withdraw the rejections of Claims 8, 10, and 14-19 for obviousness under 35 U.S.C. § 103(a).

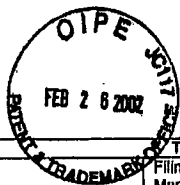
3. Applicants believe that the Examiner's rejections have been overcome, and respectfully request the Examiner to withdraw the rejections, and allow the present claims. The undersigned invites the Examiner to call 312-321-4711 at the Examiner's convenience, to discuss the issues in this case or if a call will aid in expediting the present application.

Respectfully submitted,



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TRANSMITTAL LETTER			Case No. 10367/1913
Serial No. 09/802,174	Filing Date March 8, 2001	Examiner Mark H. Paschall	Group Art Unit 3742
Inventor(s) James E. Decobert et al.			
Title of Invention Programmable Slow-Cooker Appliance			

TO THE COMMISSIONER FOR PATENTS

Transmitted herewith is Response to Office Action: First Supplemental Information Disclosure Statement (in dup.). Form PTO-1449; eight cited references; check for \$180; and return post card.

- ☐ Small entity status of this application under 37 CFR § 1.27 has been established by verified statement previously submitted.
- ☒ A verified statement to establish small entity status under 37 CFR §§ 1.9 and 1.27 is enclosed.
- ☐ Petition for a _____ month extension of time.
- ☐ No additional fee is required.
- ☐ The fee has been calculated as shown below:

				Small Entity		or	Other Than Small Entity	
	Claims Remaining After Amendment	Highest No. Previously Paid For	Present Extra	Rate	Add'l Fee		Rate	Add'l Fee
Total		Minus		x \$9=			x \$18=	
Indep.		Minus		x \$42=			x \$84=	
First Presentation of Multiple Dep. Claim				+\$140=			+ \$280=	
				Total add'l fee	\$		Total add'l fee	\$

- ☐ Please charge Deposit Account No. 23-1925 (BRINKS HOFER GILSON & LIONE) in the amount of \$_____. A duplicate copy of this sheet is enclosed.
- ☐ A check in the amount of \$_____ to cover the filing fee is enclosed.
- ☒ The Commissioner is hereby authorized to charge payment of any additional filing fees required under 37 CFR § 1.16 and any patent application processing fees under 37 CFR § 1.17 associated with this communication or credit any overpayment to Deposit Account No. 23-1925. A duplicate copy of this sheet is enclosed.
- ☒ I hereby petition under 37 CFR § 1.136(a) for any extension of time required to ensure that this paper is timely filed. Please charge any associated fees which have not otherwise been paid to Deposit Account No. 23-1925. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

David W. Okey
David W. Okey
Registration No. 42,959
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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231, on February 12, 2002.

Date: 12 Feb 2002

Signature: *David W. Okey*

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Documents

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EXHIBIT H



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
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 Washington, D.C. 20231
 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/802,174	03/08/2001	James E. DeCobert	10367/1913	5948

757 7590 05/21/2002
 BRINKS HOFER GILSON & LIONE
 P.O. BOX 10395
 CHICAGO, IL 60610

EXAMINER

PASCHALL, MARK H

ART UNIT

PAPER NUMBER

3742

DATE MAILED: 05/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.


**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

 Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
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EXAMINER

ART UNIT	PAPER NUMBER
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10

DATE MAILED:

 This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS
OFFICE ACTION SUMMARY
☒ Responsive to communication(s) filed on 2/26/02
☐ This action is FINAL.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

 A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).
Disposition of Claims
☒ Claim(s) 1-19 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-19 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.
Application Papers
☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.
Priority under 35 U.S.C. § 119
☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
Attachment(s)
☐ Notice of Reference Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 9
☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1-7,9,11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rivelli et al in view of either Frey, Jr. et al or Skutt et al '029.

Rivelli et al teach the claimed subject matter except for showing slots on adjacent sides of the housing (top and bottom) for convection cooling of the electrical components. However, such structure is conventional as evidenced by both Frey, Jr. et al and Skutt et al and in view of the same it would have been obvious to modify the Rivelli et al system with the same to more efficiently extend the life of the device.

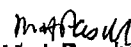
3. Claims 8,10 and 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rivelli et al in view of either Frey, Jr. et al or Skutt et al as set forth above, taken further with Yung. Rivelli et al as modified above teaches the claimed subject matter except for showing use of the claimed time and temperature ranges and use of a digital display. However, as set forth in Yung it is conventional to use digital readout and it is considered obvious to choose appropriate temperature ranges and cooking times.


4. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. H. Paschall whose telephone number is (703) 308-1642.

mp

May 20, 2002


Mark Paschall
Primary Examiner



FORM PTO-1449	SERIAL NO. 09/802,174	CASE NO. 10367/1913
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (use several sheets if necessary)	FILING DATE March 8, 2001	GROUP ART UNIT 3742
	APPLICANT(S): James E. Decobert et al.	

REFERENCE DESIGNATION			U.S. PATENT DOCUMENTS			
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS/ SUBCLASS	FILING DATE
<i>MM</i>	A1	3,681,663	08/1972	Albers	X	X
	A2	4,535,386	08/1985	Frey, Jr. et al.		
	A3	4,742,864	05/1988	Duell et al.		
	A4	5,477,029	12/1995	Skutt et al.		
	A5	5,539,185	07/1996	Polster		
	A6	5,734,149	03/1998	Skutt et al.		
	A7	6,191,393	02/2001	Park		
<i>MM</i>	A8	6,229,507	05/2001	Nakamura et al.		

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EXAMINER Mark Paschall	DATE CONSIDERED 5/20/02
-------------------------------	--------------------------------

EXAMINER: ~~Primary Examiner~~ considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

EXHIBIT I

I hereby certify that this correspondence is being deposited
with the United States Postal Service, with sufficient
postage, as first class mail in an envelope addressed to:

Commissioner for Patents
Washington, D.C. 20231
on August 21, 2002

Date of Deposit

David W. Okey

Name of applicants, assignee or
Registered Representative

D. W. Okey

Signature

21 AUGUST 2002

Date of Signature



COPY OF PAPERS
ORIGINALLY FILED

9-17-02
Amdt
11/B

Our Case No. 10367/1913

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: DeCobert et al.

Serial No. 09/802,174

Filing Date: March 8, 2001

For: Programmable Slow Cooker
Appliance

Examiner: Mark H. Paschall

Group Art Unit No. 3742

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TECHNOLOGY CENTER R3700

RESPONSE TO OFFICE ACTION

Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

In response to the May 21, 2002 Office Action, Applicants have timely submitted this Response and amendment by certificate of mailing. Applicants respectfully request the Examiner to reconsider the application. Applicants request the Examiner to withdraw rejections for anticipation and for obviousness, and to grant the application in view of the following remarks.

IN THE CLAIMS

Please substitute the claims below for the like-numbered claims in the application. A marked up copy with additions underlined is attached as Appendix A.

A1
1. (Amended) A programmable slow-cooker appliance, comprising:
a heating unit;
a cooking unit adapted to fit at least partially within the heating unit;
a controller housing fixedly mounted to an outside of the heating unit; and
a programmable controller mounted to the housing to control the heating unit, wherein said housing is configured to convect heat away from the controller.

A2
13. (Amended) A method of using a programmable slow-cooker appliance, the method comprising:
providing a food item;
placing the food item into a cooking unit of the slow-cooker appliance;
selecting a cooking temperature and time using a programmable controller mounted to a housing fixedly mounted to a heating unit; and
changing the heating unit temperature automatically to a lower temperature after the selected time.

REMARKS

1. Claims 1-19 are pending in the application. Applicants have amended Claims 1 and 13, for which marked up copies with additions underlined are attached as Appendix A. No new matter was added in amending the claims, for which support is found at least in the specification and in Figs. 4 and 7.

2. Rejections under 35 U.S.C. § 103(a).

The Examiner has rejected Claims 1-7, 9, and 11-13 as being unpatentable over U.S. Pat. No. 3,904,852, Rivelli et al. ("Rivelli") in view of either U.S. Pat. No. 4,535,386, Frey, Jr., et al. ("Frey") or U.S. Pat. No. 5,477,029, Skutt et al. ("Skutt"). Applicants respectfully traverse the rejections, since there is no suggestion in the prior art to combine these references. Even if the references were combinable, the combination does not yield the claimed invention of Claims 1, 11 and 13, which is a programmable slow-cooker appliance comprising a heating unit, a cooking unit, a controller housing mounted outside the heating unit, and a programmable controller mounted to the housing, where heat is convected away from the housing.

The Examiner states that Rivelli teaches the claimed subject matter except for showing cooling slots on the top and bottom sides of the housing for convection cooling of the electrical components, while Frey and Skutt both show cooling slots. The Examiner states that it would have been obvious to modify the system of Rivelli to arrive at the claimed invention. Applicants traverse the Examiner's characterization of Rivelli, which has no convection cooling whatever. Rivelli describes a deep fat frying module in which the control chamber is positioned within a heating module, with dead air space and thick insulation to prevent heat from rising above 250°F. Besides the cooling slots mentioned by the Examiner, channels would also be needed within the housing for effective cooling via convection. Instead, Rivelli uses insulation to prevent conduction of heat to the controller; Rivelli does not use convection to carry heat away from the controller. See Fig. 1 and col. 3, lines 19-28.

Frey discloses a sealed configuration that upwardly circulates warmed air from hot electrical components through a heat exchanger and then into a downward circulating cooling flow. See Figs. 1 and 2, col. 2, lines 11-20, and col. 3, lines 46-59. The combination of Rivelli and Frey does not describe or suggest a device having a controller housing mounted outside the

heating unit nor having other claimed features, such as those that would allow convection to occur. The combination, therefore, does not describe or suggest the claimed invention.

Skutt relates to kilns used for firing pottery or ceramics. Col. 1, lines 1-3. Skutt discloses a ceramic kiln with a control box hinged to the exterior of the kiln. The controller is not mounted directly to the kiln, but connected by hinges, and in direct thermal contact with the kiln only through pins and receptacles for electric power to the kiln. *See* Fig. 7 and col. 3, lines 30-33. As discussed above, Rivelli describes a deep fat frying module (for cooking food) in which the control chamber is positioned within a heating module. There must be some motivation, suggestion, or teaching of the desirability of making the specific combination that was made by the applicant. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1316 (Fed. Cir. 2000). There is no motivation to combine a cooking implement with a ceramic kiln. Even if combined, the combination does not yield a cooking implement having a controller housing fixedly mounted to an outside of the housing, since the control module of Rivelli is contained within the single housing, while the controller of Skutt is only hingedly mounted to the exterior of the housing. Applicants have amended the claims to better describe the fixed mounting of the housing to the exterior of the heating unit.

Accordingly, Applicants believe the Examiner's rejection based on obviousness under 35 U.S.C. § 103(a) is overcome. Applicants respectfully request that the Examiner withdraw the rejections under 35 U.S.C. § 103(a) of Claims 1-7, 9, 11, 12, and 13 for obviousness.

3. The Examiner rejected Claims 8, 10, and 14-19 under 35 U.S.C. § 103(a) as being unpatentable over Rivelli in view of either Frey or Skutt, as mentioned above, and further in view of U.S. Pat. No. 6,196,113, Simon Yung ("Yung"). Again, applicants respectfully traverse the rejections, since there is no suggestion in the prior art to combine these references. Along with a digital readout and instruments, Yung discloses an internally circulating convection system using a fan. *See* col. 2, lines 53-57 (describing the use of a centrifugal fan to circulate air within a breadmaker).

The combination of Rivelli, Frey, and Yung does not describe or suggest the invention claimed in independent Claims 1, 11 and 13 of the present application, and from which Claims 8, 10, and 14-19 depend. As mentioned above, neither Rivelli nor Frey describe a housing for a programmable controller fixedly mounted to the outside of the heating unit. Yung also fails to

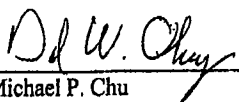
describe a housing for a controller mounted outside the heating unit. In Yung, a programmable controller is mounted inside the housing, not outside. See Figs. 5A and 5B, and also col. 7, lines 34-51. Therefore, the combination of Rivelli, Frey and Yung fail to describe or suggest a controller housing fixedly mounted to the outside of the heating unit.

The combination of Rivelli, Skutt and Yung, certainly improper in light of the ceramic kiln of Skutt, also fails to describe or suggest the claimed invention. While Rivelli and Yung disclose controllers mounted to a single housing, Skutt discloses a kiln in which a controller is not fixedly mounted on the outside of the kiln, but is connected via hinges. *See* Skutt, Fig. 7 and col. 3, lines 30-33 (stating that the control box is spaced away from the kiln exterior and is in direct thermal contact only through the pins and receptacles). Therefore, even an improper combination does not describe or suggest the claimed invention, including a controller housing mounted fixedly to the outside of the heating unit.

The Applicants therefore believe the Examiner's rejection based on obviousness under 35 U.S.C. § 103(a) is overcome. Applicants respectfully request the Examiner to withdraw the rejections of Claims 8, 10, and 14-19 for obviousness under 35 U.S.C. § 103(a).

4. Applicants believe that the Examiner's rejections have been overcome, and respectfully request the Examiner to withdraw the rejections and allow the present claims. The undersigned invites the Examiner to call 312-321-4711 at the Examiner's convenience, to discuss the issues in this case or if a call will aid in expediting the present application.

Respectfully submitted,


 Michael P. Chu
 Reg. No. 37,112
 David W. Okey
 Reg. No. 42,959
 Attorneys for Applicants

BRINKS HOFER GILSON & LIONE
 P.O. BOX 10395
 CHICAGO, ILLINOIS 60610
 (312) 321-4200



APPENDIX A

COPY OF PAPERS
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1. (Amended) A programmable slow-cooker appliance, comprising:
 - a heating unit;
 - a cooking unit adapted to fit at least partially within the heating unit;
 - a controller housing fixedly mounted to an outside of the heating unit; and
 - a programmable controller mounted to the housing to control the heating unit, wherein said housing is configured to convect heat away from the controller.

13. (Amended) A method of using a programmable slow-cooker appliance, the method comprising:
 - providing a food item;
 - placing the food item into a cooking unit of the slow-cooker appliance;
 - selecting a cooking temperature and time using a programmable controller mounted to a housing fixedly mounted to a heating unit; and
 - changing the heating unit temperature automatically to a lower temperature after the selected time.

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GP/3742

TRANSMITTAL LETTER			Case No. 10367/1913
Serial No. 09/802,174	Filing Date March 8, 2001	Examiner Mark H. Paschall	Group Art Unit 3742
Inventor(s) DeCobert et al.			
Title of Invention Programmable Slow Cooker Appliance			

COPY OF PAPERS
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TO THE COMMISSIONER FOR PATENTS

Transmitted herewith is Response to Office Action; and return post card.

- ☐ Small entity status of this application under 37 CFR § 1.27 has been established by verified statement previously submitted.
- ☐ A verified statement to establish small entity status under 37 CFR §§ 1.9 and 1.27 is enclosed.
- ☐ Petition for a _____ month extension of time.
- ☒ No additional fee is required.
- ☐ The fee has been calculated as shown below:

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Small Entity		Other Than Small Entity	
Rate	Add'l Fee	Rate	Add'l Fee
x \$8=		x \$16=	
x 42=		x \$84=	
+ \$140=		+ \$280=	
Total add'l fee	\$	Total add'l fee	\$

Claims Remaining After Amendment	Highest No. Previously Paid For	Present Extra
Total	Minus	
Indep.	Minus	

First Presentation of Multiple Dep. Claim

- ☐ Please charge Deposit Account No. 23-1925 (BRINKS HOFER GILSON & LIONE) in the amount of \$_____. A duplicate copy of this sheet is enclosed.
- ☐ A check in the amount of \$_____ to cover the filing fee is enclosed.
- ☒ The Commissioner is hereby authorized to charge payment of any additional filing fees required under 37 CFR § 1.16 and any patent application processing fees under 37 CFR § 1.17 associated with this communication or credit any overpayment to Deposit Account No. 23-1925. A duplicate copy of this sheet is enclosed.
- ☒ I hereby petition under 37 CFR § 1.136(a) for any extension of time required to ensure that this paper is timely filed. Please charge any associated fees which have not otherwise been paid to Deposit Account No. 23-1925. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

David W. Okey
Registration No. 42,959
Attorney for Applicant
BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, ILLINOIS 60610
(312) 321-4200

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231, on August 21, 2002.

Date: Aug 21, 2002 Signature: rev. Dec.-00
Document2

EXHIBIT J



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/386,276	03/11/2003	James F. DeCobert	10367/2106	6197

7590 07/30/2003
 David W. Okey
 BRINKS HOFER GILSON & LIONE
 P.O. BOX 10395
 CHICAGO, IL 60610

EXAMINER

PASCHALL, MARK H

ART UNIT

PAPER NUMBER

3742

DATE MAILED: 07/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/386,278	DECOBERT ET AL.	
	Examiner	Art Unit	
	Mark H Paschall	3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.

2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 34-58 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 34-58 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>1</u> .	6) <input type="checkbox"/> Other:

Application/Control Number: 10/386,276
Art Unit: 3742

Page 2

Continued Prosecution Application

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims s 34-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rivelli et al in view of wither Skutt et al 149' or Polster. Rivelli et al teach the claimed controller for a programmable cooker including inner and outer housings and a control housing 30 which houses pc controller 42. Rivelli et al do not show the claimed upper and lower vents, which enable the controller to remain cool. However, as set forth in both Polster and Skutt et al it is conventional to provide such vents for cooling and use of the same enables a longer lasting and heat insensitive control of the cooking

Application/Control Number: 10/386,276
Art Unit: 3742

Page 3

process. In view of these teachings it would have been obvious to modify the Rivelli et al system to attain the benefits of a cooler control module by providing upper, and lower vents to create a chimney like air flow in the control chamber.

Note paragraph 2 in column 6 in Polster. Note

Figure 4 in Skutt et al, which also show the venting system. As per the dependent claims it is considered an obvious choice to use a triac and/or heat sink to cool the same, since the elements are conventional elements in cooking devices. As per claim 43 use of thermoplastic as the housing material is an obvious choice since the same is conventionally used in heating devices in place of metal. As per claim 41-note element 56,58, which acts as the claimed shield. As per claim 46 use of a microprocessor is an obvious choice since Rivelli et al teach a printed circuit device as the controller and microprocessors are conventional components in programmable cooking devices.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wood is cited for disclosing an audio alert for a cooking device. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark H Paschall whose telephone number is 703 308-1642. The examiner can normally be reached on 7am - 3pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teresa Walberg can be reached on 703 308-1327. The fax phone numbers

Application/Control Number: 10/386,276
Art Unit: 3742

Page 4

for the organization where this application or proceeding is assigned are 703 305-3463
for regular communications and 703 395-3463 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or
proceeding should be directed to the receptionist whose telephone number is 703 308-
0861.


Mark H Paschall
Primary Examiner
Art Unit 3742

July 27, 2003

Notice of References Cited	Application/Control No. 10/386,276	Applicant(s)/Patent Under Reexamination DECOBERT ET AL.	
	Examiner Mark H Paschall	Art Unit 3742	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-4382176	05-1983	Wood	219/494
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
 Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

EXHIBIT K



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TECHNOLOGY CENTER R3700

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s)	DeCobert et al.	Examiner:	M.H. Paschall
Serial No.:	10/386,276	Group Art Unit:	3742
Confirmation No.:	6197	Docket:	717-675 CON
Filed:	March 11, 2003	Dated:	November 13, 2003
For:	PROGRAMMABLE SLOW-COOKER APPLIANCE		

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

*I hereby certify this correspondence is being deposited
with the United States Postal Service as first class mail,
postpaid in an envelope, addressed to:
Commissioner for Patents, P.O. Box 1450,
Alexandria, Virginia 22313-1450
on November 13, 2003.*

Signed: Julie L. Watts

AMENDMENT

Sir:

In response to the Office Action from the Patent and Trademark Office dated July 30,
2003, kindly amend the above-referenced application as follows:

Amendments to the Claims begin on page 2.

Remarks begin on page 14.

11/20/2003 EFLORES 00000039 082461 10386276

04 FC:1201		172.00 DP
05 FC:1202	114.00 DA	210.00 DP

Applicant: DeCobert, et al.
Application Serial No.: 10/386,276
Filing Date: March 11, 2003
Docket No.: 717-675 CON
Page 2 of 21

IN THE CLAIMS:

Listing of Claims:

1-33. (cancelled).

34. (Currently Amended) A programmable slow-cooker appliance comprising:
a heating unit including a bottom and a continuous sidewall extending from
said bottom, said bottom and said continuous sidewall including an outer sidewall and an
interior sidewall and defining a well-like heating chamber;
a heating element mounted to said heating unit and disposed between said
outer sidewall and said interior sidewall;
a cooking unit at least partially received within said well-like chamber;
a non-conductive housing fixedly mounted to and projecting outside said
continuous sidewall of said heating unit, said housing having a bottom wall;
a lower vent in said bottom wall of said housing for admitting relatively cool
air to said housing;
an upper vent in said housing for allowing the escape of relatively warm air
from said housing;
a programmable circuit positioned within said housing such that heat is
convected away therefrom as air passes through said housing and said vents and electrically

Applicant: DeCobert, et al.
Application Serial No.: 10/386,276
Filing Date: March 11, 2003
Docket No.: 717-675 CON
Page 3 of 21

connected to said heating element to electronically control and program cooking cycles and temperature; and

a control panel on said housing, said control panel being electronically connected to said programmable circuit.

0' 2³⁶. (Currently Amended) A programmable slow-cooker appliance as described in claim 34 wherein said housing is comprised of a shield and a housing portion, said shield being interposed between and adjoining said outer sidewall of said heating unit and said housing portion, said control panel being incorporated on said housing portion.

3³⁶. (Previously Added) A programmable slow-cooker appliance as described in claim 35 including a circuit board including said circuit mounted to and positioned within said housing, and a Triac electrically connected between said circuit board and said heating element.

4³⁶. (Previously Added) A programmable slow-cooker appliance as described in claim 36 further including a heat sink position within said housing between said circuit and said control panel.

6³⁶. (Previously Added) A programmable slow-cooker appliance as described in claim 37 wherein said Triac includes a heat sink tab in thermal contact with said heat sink.

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Applicant: DeCobert, et al.
Application Serial No.: 10/386,276
Filing Date: March 11, 2003
Docket No.: 717-675 CON
Page 4 of 21

636. (Previously Added) A programmable slow-cooker appliance as described in claim 34 wherein said control panel includes a user interface located on an inclined front surface of said housing spaced away from said outer sidewall of said heating unit.

7
640. (Previously Added) A programmable slow-cooker appliance as described in claim 39 wherein said lower and upper vents are positioned to allow air to circulate behind said control panel and assist in the dissipation of heat from said programmable circuit.

8
641. (Currently Amended) A programmable slow-cooker appliance as described in claim 39 wherein said housing is comprised of a shield and a housing portion, said shield being interposed between and adjoining said outer sidewall of heating unit and said housing portion, said control panel being incorporated on said housing portion.

9
642. (Previously Added) A programmable slow-cooker appliance as described in claim 41 wherein said upper and lower vents are in said housing portion.

10
643. (Previously Added) A programmable slow cooker appliance as described in claim 42 wherein said housing is comprised of a thermoplastic material.

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44. (Currently Amended) A programmable slow-cooker appliance as described in claim 34 ~~including a ceramic~~ wherein said cooking unit is made from a ceramic material and is removably positioned in said well-like chamber.

45. (Currently Amended) A programmable slow-cooker appliance comprising:
 a heating unit including a bottom and a continuous sidewall extending from said bottom, said bottom and said continuous sidewall defining a well-like chamber, ~~said continuous sidewall including an outer sidewall and an interior sidewall;~~
 a heating element mounted to said heating unit for providing heat to said well-like chamber and ~~disposed between said outer sidewall and said interior sidewall;~~
 a ceramic cooking unit removably positioned in said well-like chamber;
 a non-conductive housing fixedly mounted to and projecting outside said continuous sidewall of said heating unit;
 a programmable circuit positioned within said housing and electrically connected to said heating element to electronically control and program cooking cycles and temperature;
 means including vents in said housing for cooling said programmable circuit by convecting heat away therefrom; and
 a control panel mounted to said housing and electrically connected to said programmable circuit.

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¹³
~~46~~₁₂ (Previously Added) A programmable slow-cooker appliance as described in claim ~~45~~ wherein said programmable circuit includes a microprocessor controller.

¹⁴
~~46~~₁₃ (Currently Amended) A programmable slow-cooker appliance as described in claim ~~46~~ wherein said housing is comprised of a shield and a housing portion, said shield being interposed between and adjoining said sidewall of said heating unit and said housing portion, said control panel being incorporated on said housing portion.

¹⁵
~~48~~₁₂ (Previously Added) A programmable slow-cooker appliance as described in claim ~~45~~ including means for automatically switching said heating element from a cook mode to a warm mode.

¹⁴
~~46~~₁₅ (Previously Added) A programmable slow-cooker appliance as described in claim ~~48~~ including a Triac electrically connected between said programmable circuit and said heating element.

¹⁷
~~50~~₁₆ (Previously Added) A programmable slow-cooker appliance as described in claim ~~49~~ including a heat sink positioned within said housing, said Triac including a heat sink tab in thermal contact with said heat sink.

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1851. (Previously Added) A programmable slow-cooker appliance as described in claim 45 wherein said means for cooking includes a lower vent in said housing for admitting relatively cool air to said housing and an upper vent in said housing for allowing the escape of relatively warm air from said housing.

1951. (Currently Amended) A programmable slow-cooker appliance as described in claim 45 wherein said cooking unit is made from a ceramic material wherein said programmable circuit is configured to switch said heating element from a cooking mode to a warming mode at the expiration of a set cooking time.

2051. (Currently Amended) A programmable slow-cooker appliance comprising:
a heating unit including a bottom and a continuous sidewall extending from said bottom, said bottom and said continuous sidewall defining a well-like chamber, said continuous sidewall including an outer sidewall and an interior sidewall;
a heating element mounted to said heating unit and disposed between said outer sidewall and said interior sidewall;
a housing fixedly mounted to and projecting outside said continuous sidewall of said heating unit;
a programmable circuit positioned within said housing including means for automatically switching and configured to automatically switch said heating element from a cook mode to a lower temperature warm mode at the end of a set cooking time;

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means a control panel mounted to said housing and including a user interface
connected to said programmable circuit for selecting a cooking temperature and cooking
time; and

~~means for ventilating said housing; and~~

a cooking unit removably positioned in said well-like chamber.

9' 21/54. (Currently Amended) A programmable slow-cooker appliance as described in
claim 53 wherein said housing includes a plurality of vent openings, a thermoplastic shield
and a housing portion, said shield being disposed between and adjoining said outer sidewall
of said heating unit and said housing portion, said housing portion including a control panel.

22 21/56. (Previously Added) A programmable slow-cooker appliance as described in
claim 54 including a heat sink positioned within said housing.

23 22/57. (Previously Added) A programmable slow-cooker appliance as described in
claim 55 including a Triac positioned within said housing and electrically connected between
said programmable circuit and said heating element, said Triac being in thermal contact with
said heat sink.

24 20/57. (Currently Amended) A programmable slow-cooker appliance as described in
claim 55 wherein said housing is comprised of a thermoplastic material and said cooking unit

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is comprised of a ceramic material, said cooking unit being removably positioned in said well-like chamber.

25
58.
21 (Previously Added) A programmable slow-cooker appliance as described in claim 54 wherein said housing is comprised of a thermoplastic material and said cooking unit is comprised of a ceramic material.

26
59.
20 (New) A programmable slow-cooker appliance as described in claim 53 wherein said programmable circuit is configured such that a user cannot initially set a lower temperature warm mode.

27
60.
20 (New) A programmable slow-cooker appliance as described in claim 53 including a switch operatively associated with said control panel, said programmable circuit being configured such that subsequent pushes of said switch activates different cook modes.

28
61.
27 (New) A programmable slow-cooker as described in claim 60 wherein said housing is vented.

29
62.
20 (New) A programmable slow-cooker appliance as described in claim 53 wherein said housing includes a thermoplastic portion adjoining and extending into said continuous sidewall of said heating unit.

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³⁰
~~63~~. (New) A programmable slow-cooker appliance as described in claim ²⁰53⁻ wherein said circuit is configured to default to cause operation of said appliance at a cooking temperature when plugged into a power source.

³¹
~~64~~. (New) A slow-cooker appliance comprising:
a heating unit including a bottom and a sidewall defining a well-like heating chamber and a heating element for providing heat to said heating chamber;
a ceramic cooking unit including a bottom, a continuous sidewall upstanding from said bottom, and a lip extending outwardly from said sidewall, said cooking unit being dimensioned to be at least partially received within said well-like heating chamber and supported by engagement of said lip with said heating unit;
a housing assembly mounted to and projecting outwardly from said sidewall of said heating unit, said housing assembly including a thermoplastic portion adjoining said outer sidewall, an inclined front surface including a control panel having a user interface, and a vent opening; and
a programmable circuit positioned within said housing assembly, said user interface being connected to said programmable circuit for selecting cooking temperature and cooking time, said programmable circuit being configured to automatically switch said heating element from a cook mode to a lower temperature warm mode at the end of a set cooking time.

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³¹
~~27~~₆₅. (New) A slow-cooker appliance as described in claim ~~64~~ wherein said thermoplastic portion of said housing assembly extends into said sidewall of said heating unit.

³¹
~~33~~₆₆. (New) A slow-cooker appliance as described in claim ~~64~~ wherein said housing assembly includes a bottom wall including a plurality of vent openings.

³³
~~34~~₆₇. (New) A slow-cooker appliance as described in claim ~~66~~ wherein said housing assembly includes a plurality of upper vent openings such that heat is convected away from said programmable circuit as air flows into said housing assembly through said vent openings in said bottom wall, through said housing assembly, and out of said housing assembly through said upper vent openings.

³¹
~~35~~₆₈. (New) A slow-cooker appliance as described in claim ~~64~~ including a switch operatively associated with said control panel, said programmable circuit being configured such that subsequent pushes of said switch activates different cook modes.

³¹
~~36~~₆₉. (New) A slow-cooker appliance as described in claim ~~64~~ wherein said circuit is configured to default to cause operation of said appliance at a cooking temperature when plugged into a power source.

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37p. (New) A programmable slow-cooker appliance comprising:
a heating unit including a bottom and a continuous sidewall defining a well-like heating chamber and a heating element positioned for providing heat to said well-like heating chamber;

a cooking unit including a lip and adapted to fit at least partially within said heating unit such that said lip engages a top portion of said heating unit;

a housing assembly mounted to and projecting from said sidewall of said heating unit, said housing assembly including a thermoplastic portion adjoining said sidewall of said heating unit, a bottom wall adjoining said sidewall, and an inclined front surface including a control panel user interface spaced from said sidewall; and

a circuit including a programmable controller positioned within said housing assembly and operatively associated with said user interface, said circuit being configured to allow a user to set both cooking temperature and cooking time and to cause said heating element to operate in a warm mode at the expiration of a set cooking time, said control panel being electronically connected to said circuit.

38p. (New) A programmable slow-cooker appliance as described in claim 37 wherein said circuit is incorporated on a printed circuit board and a heat sink is positioned in said housing assembly between said printed circuit board and said control panel user interface.

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³⁹₇₂. (New) A programmable slow-cooker appliance as described in claim ³⁷~~70~~
wherein said bottom wall of said housing assembly is vented.

⁴⁰₇₃. (New) A programmable slow-cooker appliance as described in claim ³⁹~~72~~
wherein said housing assembly includes an upper vent opening positioned such that, when
operated, relatively cool air enters said housing assembly through said vented bottom wall,
passes over said circuit, and relatively warm air exits said housing assembly through said
upper vent opening.

⁴¹₇₄. (New) A programmable slow-cooker appliance as described in claim ³⁷~~70~~
wherein said circuit is configured to default to cause operation of said appliance at a cooking
temperature when plugged into a power source.

⁴²₇₅. (New) A programmable slow-cooker appliance as described in claim ⁴¹~~74~~
including a switch operatively associated with said control panel such that subsequent pushes
of said switch activates different cooking times and temperatures.

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REMARKS

Reconsideration of the above-referenced patent application is respectfully requested.

Claims 34-75 are now pending in this application. Independent claims 34, 45 and 53 have been amended. Marked up copies of these claims with additions underlined are attached. New dependent claims 58-63 have been added. Support for these claims is found at page 11, line 13 (claim 58); page 10, lines 29-30 (claim 59); page 7, lines 16-23 (claim 60); page 7, lines 16-23 (claim 61); page 7, lines 12-15 (claim 62); and page 11, lines 19-20 (claims 63, 69, and 74), respectively. Two new independent claims 64 and 70 have been added. Claims 65-69 are dependent on claim 64. These claims are also fully supported by the patent specification and drawings. Claims 71-75 depend on claim 70.

Claims 34-58 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 3,904,852 to Rivelli et al. ("Rivelli") in view of either U.S. Patent No. 5,477,029 to Skutt et al. ("Skutt") or U.S. Patent No. 5,539,185 to Polster ("Polster"). The rejection is respectfully traversed as there is no suggestion in the prior art to combine these references. Moreover, even if the references were combinable, the combination does not yield the claimed invention of the independent claims.

Rivelli discloses a fat fryer including one or more computer modules 26 that extend within a panel 16. Each module 26 includes a printed circuit board 42 spaced from a chassis

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28 and within side covers 30 and a face plate 32. The panel 16 include slotted openings 24 for releasing warm air. Insulation 58,64 and a dead air compartment 54 protect the module 26 from excessive heat as described at col. 4, lines 40-61. The patent indicates that openings communicating with the compartment 54 can be provided in the side covers 30.

Skutt discloses a kiln for firing pottery or ceramics having a control box 36 including a control panel 98. Louvers 100, 106 are provided for allowing convective air flow within the control box.

Polster discloses a food cooker/rethermalizer in which food is placed in a wire rack 40 having fluid conducting tubes 50, as shown in Fig. 2 of the patent. A heater 80 is bonded to the bottom wall 34 and lower side walls of a heater vessel 30 that contains the rack 40. A controller 1 including a control panel 100 is used to allow different food products having different cooking requirements to be cooked at the same time. A control chamber 24 is isolated from a heating chamber 22 by wall 22a, 24a defining a space 26. Convection flow is provided by openings 26a, 26b in the space, thereby cooling the wall 24a of the control chamber. Vents 20e, 20f are provided in the control chamber so that it is flushed with ambient air.

First addressing the proposed combination of Rivelli and Skutt, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that

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was made by the applicant. In re Kotzab, 55 U.S.P.Q.2d 1313, 1316 (Fed. Cir. 2000). There is no motivation to combine a cooking implement with a ceramic kiln. Even if combined, the combination does not yield a slow cooker as described in any of the independent claims. Slow cookers are understood as having heating units with well-like chambers and cooking units extending within the chambers. The cooking units are often ceramic to provide even heating, and are preferably removably positioned in the chamber. Slow cookers are also understood as designed for cooking food at relatively low cooking temperatures for a relatively long period of time, such as four to ten hours. Claims 34 and 53, though already specifying a slow-cooker appliance, have been further amended to include elements that characterize slow cookers. Claim 45 as filed describes both a well-like chamber and cooking unit. The new claims also clearly describe slow cookers.

Though concerned with protecting solid state components from overheating, Rivelli's solution does not have applicability to slow cookers. As discussed at col. 2, lines 28-33, Rivelli provides a dead air space compartment 54 within the cooker console housing. The module 26 housing the circuit board is mounted within the compartment rather than projecting from an outer sidewall as described in the independent claims of the present application. It is clear that, when considered as a whole, the structure disclosed by Rivelli has no applicability to slow cookers. Skutt takes a completely different approach than Rivelli as described above, providing electronic controls 86 within a chimney 80. The provision of a chimney-like structure in Rivelli would likely involve causing convection flow in the dead air

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space in which the module 26 is positioned, which is contrary to the teachings of Rivelli. Claims 34 and 45 should accordingly be patentable over this combination of references.

Claim 53 as amended and new independent claims 64 and 70 are directed to slow cookers that are caused to automatically switch from a cook mode to a lower temperature warm mode at the end of a set cooking time. Ventilation of the housing for the programmable circuit is not an element of claims 53 or 70, though a vent is required in dependent claims 54, 61, 72, and 73. New claim 64 recites a vent opening in the housing assembly, while dependent claims 66 and 67 recite additional elements relating to further openings in the housing assembly. Claim 67 also concerns convection cooling of the programmable circuit. Neither Rivelli nor Skutt provide for the automatic switching of a slow cooker to a warm mode following a cooking cycle. As discussed above, neither reference concerns a slow cooker. Claims 64 and 70 further require elements such as a cooking unit with a lip. Such elements are common to slow cookers though not the cited art. A housing assembly with a thermoplastic portion is also recited in claims 64 and 70. New claim 59 is directed to a feature that prevents the "warm" mode from being an initial setting. The initial setting will accordingly be a cooking mode. The user accordingly will not tend to inadvertently set the slow cooker to a temperature that is not adequate for cooking. Neither Rivelli nor Skutt discloses or suggests the subject matter of claim 59. New claims 60, 68, and 75 require a programmable circuit that causes the actuation of different cooking modes upon subsequent pushes of a switch. New claims 63, 69, and 74 relate to a default feature whereby

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the slow cooker is set to a cooking temperature when plugged in. Such a feature is not disclosed in the art of record, and also helps prevent inadvertent attempts to cook at a "warming" temperature. The Examiner is respectfully requested to withdraw the rejection of claims 34-58 as unpatentable over Rivelli in view of Skutt. Favorable consideration of the new claims is respectfully requested

The combination of Rivelli and Polster also would not lead one of skill in the art to the inventions described in claims 34, 45, 53, 64, and 70. First, neither reference is directed to a slow cooker. The Polster apparatus is designed to provide fluid flow action over food packages. A designer of slow cookers would not look to devices for cooking packaged food for improving slow cookers. Second, the technique for cooling the electronic control chamber in Polster (flushing with ambient air) would not be compatible with the Rivelli fryer apparatus. With respect to claims 53, 64, and 70 and the claims dependent thereon, there is no suggestion to provide a warming mode following a cooking mode in a slow cooker as recited. There is also no suggestion to default to a cooking temperature when the appliance is plugged in, as recited in claims 63, 69, and 74, or to prevent initially setting the appliance to a warming temperature as recited in claim 59.

Claim 41 as well as several other dependent claims (e.g. claims 35, 47, 54) call for a shield. The Examiner has indicated that elements 56, 58 of the Rivelli apparatus functions as a shield. Claims 35, 41, 47, and 54 have been amended to describe the shield as adjoining

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both the sidewall of the heating unit and the housing. Members 56, 58 of the Rivelli device do not adjoin a heating unit.

An Information Disclosure Statement and a Supplemental Information Disclosure Statement were filed August 11, 2003 and August 21, 2003, respectively. They were filed without a fee as the undersigned attorney was not aware that an action had been issued. An Information Disclosure Statement is accordingly submitted with the appropriate fee and enclosing all the references previously submitted and additional references that have come to the attention of Applicants. One of the submitted reference, U.S. Patent No. 6,362,459 to Schmidt, discloses an electronically controlled roaster. The roaster includes a digital control assembly that is fastened to the bottom of a base. Slotted openings are provided to provide airflow through the control assembly. The "Background" section of the Schmidt patent describes various electric cooking appliances, including slow cookers. This section also states that the cooking temperature of most such appliances, if controlled at all, is controlled with a knob on the front of the appliance. The patentee further recognizes the problem of locating electronics in close proximity to a cooking appliance, and the fact that they must be kept cool enough to prevent failures.

Schmidt takes a somewhat different approach to addressing the problem of maintaining the electronic controls at an acceptable temperature than that described in claims 34 and 45. A recess is formed in the bottom of the appliance, and the housing for the PC

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board is positioned in the recess. The housing is fastened to the bottom wall of the appliance. Such a recess is unnecessary in the Applicant's appliance where the housing for the electronics is mounted to the sidewall of the heating unit rather than beneath it. It is further noted that the Schmidt appliance shuts off after the cooking time has elapsed rather than switching to a warming mode.

The Schmidt patent has a filing date of January 12, 2001. The present application is a continuation of application no. 09/802,174 (now U.S. Patent No. 6,573,483), which in turn claims priority of provisional application no. 60/189,443 filed March 15, 2000 and 60/196,273 filed April 5, 2000. All of the independent claims are supported by provisional application no. 60/189,443, which predates the filing of the application that matured as the Schmidt '459 patent. The disclosure contained in application no. 60/196,273 is clearly enabling with respect to the claimed subject matter. A copy of this provisional application is provided for the Examiner's convenience.

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In summary, the rejection of the claims under 35 U.S.C. §103 should now be overcome. A Notice of Allowance is respectfully requested with respect to claims 34-75.

Respectfully submitted,



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EXHIBIT L

Notice of Allowability	Application No.	Applicant(s)
	10/386,276	DECOBERT ET AL.
	Examiner	Art Unit
	Mark H Paschall	3742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- ☒ This communication is responsive to papers filed 11-17-03.
- ☒ The allowed claim(s) is/are 34-75.
- ☒ The drawings filed on 11 March 2003 are accepted by the Examiner.
- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - ☐ All
 - ☐ Some*
 - ☐ None of the:
 - ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____

- ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - ☐ The translation of the foreign language provisional application has been received.
- ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

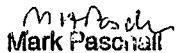
- ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
- ☐ CORRECTED DRAWINGS must be submitted.
 - ☐ Including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - ☐ hereto or 2) ☐ to Paper No. _____.
 - ☐ Including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 - ☐ Including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet.

- ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1 <input type="checkbox"/> Notice of References Cited (PTO-892)	2 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	4 <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____
5 <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. <u>8.11</u>	6 <input type="checkbox"/> Examiner's Amendment/Comment
7 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material	8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance
	9 <input type="checkbox"/> Other


Mark Paschall
 Primary Examiner

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Allowable Subject Matter

Claims 34-75 are allowed.

The following is an examiner's statement of reasons for allowance: the prior art of record does not teach: as per claims 34-44, use of an interior and exterior sidewall with a heater in between in combination with a separate housing for the controller and display which is fixedly mounted to the sidewall, with the housing having vents in lower and upper portion; as per claims 45-52, showing of a separate vessel of ceramic within the well like opening coupled with the structure set forth above; as per claims 53-75 use of a separate control housing of thermoplastic material which projects outward from the sidewall and is fixedly mounted to control the slow cooker

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

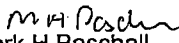
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark H Paschall whose telephone number is 703 308-1642. The examiner can normally be reached on 7am - 3pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on 703 308-2634. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0861.


Mark H Paschall
Primary Examiner
Art Unit 3742

mp



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NOTICE OF ALLOWANCE AND FEE(S) DUE

7590 02/09/2004
David W. Okey
BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60610

EXAMINER

PASCHALL, MARK H

ART UNIT

PAPER NUMBER

3742

DATE MAILED: 02/09/2004

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/386,276	03/11/2003	James E. DeCobert	10367/2106	6197

TITLE OF INVENTION: PROGRAMMABLE SLOW-COOKER APPLIANCE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1330	\$0	\$1330	05/10/2004

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.
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If the SMALL ENTITY is shown as NO:

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- B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check the box below and enclose the PUBLICATION FEE and 1/2 the ISSUE FEE shown above.
- ☐ Applicant claims SMALL ENTITY status.
See 37 CFR 1.27.

II. PART B - FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B - Fee(s) Transmittal should be completed and returned. If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax **(703) 746-4000**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 4 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Legibly mark-up with any corrections or use Block 1)

7590 02/09/2004
 David W. Okey
 BRINKS HOFER GILSON & LIONE
 P.O. BOX 10395
 CHICAGO, IL 60610

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/386,276	03/11/2003	James E. DeCobert	10367/2106	6197

TITLE OF INVENTION: PROGRAMMABLE SLOW-COOKER APPLIANCE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1330	\$0	\$1330	05/10/2004

EXAMINER	ART UNIT	CLASS-SUBCLASS
PASCHALL, MARK H	3742	219-506000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" Indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1	_____
2	_____
3	_____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. Inclusion of assignee data is only appropriate when an assignment has been previously submitted to the USPTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY AND STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ individual ☐ corporation or other private group entity ☐ government

4a. The following fee(s) are enclosed:

☐ Issue Fee

☐ Publication Fee

☐ Advance Order - # of Copies _____

4b. Payment of Fee(s):

☐ A check in the amount of the fee(s) is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☐ The Director is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

Director for Patents is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid Issue fee to the application identified above.

(Authorized Signature)

(Date)

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant, a registered attorney or agent, or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Alexandria, Virginia 22313-1450.

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EXHIBIT Q

10386276 .031103

EL893498715US
Express Mail Label No.
March 10, 2003
Date of Deposit

Our Case No. 10367/2106

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: DeCobert et al.

Serial No. Not yet Assigned

Filing Date: March 11, 2003

For: Programmable Slow Cooker
Appliance

)
)
)
) Examiner: Mark H. Paschall

)
) Group Art Unit No. 3742
)
)
)

Linna
#2/Pre
a
6/19/2003

Preliminary Amendment

Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

The Examiner is requested to enter this preliminary amendment and to advance the case to examination.

JK

10386276.031103

IN THE CLAIMS
Please cancel Claims 1-12. Please add new Claims 20-33.

Claims 1-12 (cancelled)

13. (original) A method of using a programmable slow-cooker appliance, the method comprising:
providing a food item;
placing the food item into a cooking unit of the slow-cooker appliance;
selecting a cooking temperature and time using a programmable controller mounted to a housing mounted to a heating unit; and
changing the heating unit temperature automatically to a lower temperature after the selected time.

14. (original) The method of Claim 13, further comprising notifying a user with illuminated indicators that the slow-cooker appliance is powered and that the timer is active.

15. (original) The method of Claim 13, wherein the temperature is set by default upon selection of a cooking time.

16. (original) The method of Claim 13, wherein the time is selected from the group consisting of 4 hours, 6 hours, 8 hours and 10 hours and the temperature is selected from the group consisting of high and low.

17. (original) The method of Claim 13, wherein the temperature and time are set in increments.

18. (original) The method of Claim 13, further comprising cooling the electronic circuitry of the programmable controller via a chimney effect.

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19. (original) The method of Claim 13, further comprising emitting a sound.

20. (new) A programmable slow-cooker appliance, comprising:
a heating unit;
a controller housing fixedly mounted to the heating unit; and
a programmable controller mounted in the housing to control the heating unit,
wherein said housing is configured to convect heat away from the controller.

21. (new) The slow-cooker appliance of Claim 20, wherein the housing is an enclosure for at least a portion of the controller.

22. (new) The slow-cooker appliance of Claim 20, wherein the controller housing insulates the controller from the heating unit.

23. (new) The slow-cooker appliance of Claim 22, wherein the housing further comprises a heat shield, said heat shield being made from a material selected from at least one of thermoplastics and insulating materials.

24. (new) The slow-cooker appliance of Claim 23, wherein the housing defines ventilation openings configured to allow air to flow into and out of said housing.

25. (new) The slow-cooker appliance of Claim 24, wherein the housing includes slots defined in an upper and lower part of the housing for airflow through the slots.

26. (new) The slow-cooker appliance of Claim 20, wherein the controller further comprises control elements and a display.

27. (new) The slow-cooker appliance of Claim 26, wherein the control elements are selected from the group consisting of a control panel, push-buttons, switches, and a digital readout.

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28. (new) The slow-cooker appliance of Claim 20, further comprising a temperature measuring device in communication with said controller.

29. (new) The slow-cooker appliance of Claim 20, further comprising a piezobuzzer.

30. (new) A control housing for a slow cooker heating unit, said housing comprising:
a front wall;
a bottom wall defining at least one lower opening, the bottom wall attached to the front wall; and
a circuit board mounted behind the front wall and apart from a wall of the heating unit.

31. (new) The control housing of Claim 30, further comprising a heat sink positioned between the circuit board and the front wall.

32. (new) The control housing of Claim 30, wherein the housing is made of plastic.

33. (new) The control housing of Claim 30, wherein the front wall further comprises indicators for indicating a status of the slow cooker heating unit.

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IN THE SPECIFICATION

Please add the following sentence to the first paragraph on the first page after the title page in the application, the paragraph claiming priority:

This application also claims priority to pending U.S. Pat. Appl. 09/802,174, filed March 8, 2001, the entirety of which is incorporated herein.

Please substitute the paragraph below for the first paragraph under "Summary of the Invention", beginning on p. 2, line 23, to p. 3, line 8.

One embodiment of the invention is a programmable slow-cooker appliance, including a heating unit, which includes upstanding sidewalls and a bottom wall. The sidewalls and bottom encompass a heating area. The appliance includes a heating element mounted on the inner surface of the interior wall of the heating unit. In one embodiment, the cooking area may also encompass a cooking unit inside the heating unit, suitable for holding food to be cooked. The appliance includes a programmable controller mounted ~~thereto on its outside, and preferably mounted via a controller housing, which acts to insulate the controller from the heat of the appliance, preferably via a unique system of a heat sink and ventilation. The housing, on the side of the slow-cooker appliance, utilizes ventilation holes on its bottom and top to encourage a chimney effect, in which cool air from the surroundings is drawn into ventilation slots or holes at the bottom of~~ through the housing. This air cools the controller, and the air is then expelled ~~exits~~ from ventilation holes on ~~near~~ the top of the housing, convecting heat away from the controller.

Please use this for the heading that appears on p. 4, line 17.

DETAILED DESCRIPTION OF THE DRAWINGS AND PREFERRED EMBODIMENT EMBODIMENTS

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Please use the substitute paragraph below for the first full paragraph on p. 13, lines 3-11.

Another embodiment of the slow cooker appliance adds a piezobuzzer to the circuitry. A piezobuzzer is simply an electrically-activated buzzer that can be programmed to emit a sound at desired moments. In one embodiment, a piezobuzzer may be installed as an output 315, controlled by the microprocessor controller 302, as shown in Fig. 13, and programmed to emit a sound when desired. In one embodiment, the buzzer may beep to provide feedback to a user when a pushbutton is pushed. The ~~roaster~~ slow cooker may also be programmed to emit a sound to indicate the end of the cooking time. The buzzer may also be used to emit sounds at other desired times.

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IN THE DRAWINGS

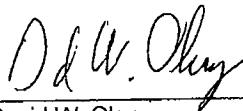
Please substitute the attached Fig. 7 in Appendix A for the original Fig. 7 in the application. The change corrects one numeral in the drawing, deleting one instance of numeral "246" and replacing it with numeral "236". No new matter has been entered in making this change.

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REMARKS

1. No new matter has been added in adding claims, amending the drawings or amending the specification. Support for the changes is found in the specification, the drawings, and the claims as originally filed. The Examiner is requested to enter this preliminary amendment and to advance the case to examination.

Respectfully submitted,



David W. Okey
Reg. No. 42,959
Attorneys for Applicant

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, ILLINOIS 60610
(312) 321-4200

EXHIBIT R



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s)	DeCobert, et al.	Examiner:	Unassigned
Serial No.:	10/386,276	Group Art Unit:	3742
Confirmation No.:	Unassigned	Docket:	717-675 CON
Filed:	March 11, 2003	Dated:	July 9, 2003
For:	PROGRAMMABLE SLOW-COOKER APPLIANCE		

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

*I hereby certify this correspondence is being deposited
with the United States Postal Service as first class mail,
postpaid in an envelope, addressed to:
Commissioner for Patents, P.O. Box 1450,
Alexandria, Virginia 22313-1450
on July 9, 2003*

Signed: Nicole Dupont

SECOND PRELIMINARY AMENDMENT

Sir:

Further to the Preliminary Amendment filed March 11, 2003, kindly amend the
above-referenced application as follows:

Amendments to the Claims begin on page 2.

Remarks begin on page 9.

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11/12/03

54.00 DP

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Applicant: DeCobert, et al.
Application Serial No.: 10/386,276
Filing Date: March 11, 2003
Docket No.: 717-675 CON
Page 2 of 9

IN THE CLAIMS

Please cancel claims 13-33 and add the following new claims.

Claims 1-33 (cancelled).

217
34. (New) A programmable slow-cooker appliance comprising:
a heating unit including a bottom and a continuous sidewall extending from
said bottom, said bottom and said continuous sidewall including an outer sidewall and an
interior sidewall;
a heating element mounted to said heating unit and disposed between said
outer sidewall and said interior sidewall;
a non-conductive housing mounted to said continuous sidewall of said heating
unit;
a lower vent in said housing for admitting relatively cool air to said housing;
an upper vent in said housing for allowing the escape of relatively warm air
from said housing;
a programmable circuit positioned within said housing and electrically
connected to said heating element to electronically control and program cooking cycles and
temperature; and
a control panel on said housing, said control panel being electronically
connected to said programmable circuit.

Applicant: DeCobert, et al.
Application Serial No.: 10/386,276
Filing Date: March 11, 2003
Docket No.: 717-675 CON
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sub D 7 35. (New) A programmable slow-cooker appliance as described in claim 34 wherein said housing is comprised of a shield and a housing portion, said shield being interposed between said heating unit and said housing portion, said control panel being incorporated on said housing portion.

36. (New) A programmable slow-cooker appliance as described in claim 35 including a circuit board including said circuit mounted to and positioned within said housing, and a Triac electrically connected between said circuit board and said heating element.

37. (New) A programmable slow-cooker appliance as described in claim 36 further including a heat sink position within said housing between said circuit and said control panel.

38. (New) A programmable slow-cooker appliance as described in claim 37 wherein said Triac includes a heat sink tab in thermal contact with said heat sink.

39. (New) A programmable slow-cooker appliance as described in claim 34 wherein said control panel includes a user interface located on an inclined front surface of said housing spaced away from said outer sidewall of said heating unit.

Applicant: DeCobert, et al.
Application Serial No.: 10/386,276
Filing Date: March 11, 2003
Docket No.: 717-675 CON
Page 4 of 9

56D, 7
40. (New) A programmable slow-cooker appliance as described in claim 39 wherein said lower and upper vents are positioned to allow air to circulate behind said control panel and assist in the dissipation of heat from said programmable circuit.

41. (New) A programmable slow-cooker appliance as described in claim 39 wherein said housing is comprised of a shield and a housing portion, said shield being interposed between said heating unit and said housing portion, said control panel being incorporated on said housing portion.

42. (New) A programmable slow-cooker appliance as described in claim 41 wherein said upper and lower vents are in said housing portion.

43. (New) A programmable slow cooker appliance as described in claim 42 wherein said housing is comprised of a thermoplastic material.

44. (New) A programmable slow-cooker appliance as described in claim 34 including a ceramic cooking unit removably positioned in said well-like chamber.

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Filing Date: March 11, 2003
Docket No.: 717-675 CON
Page 5 of 9

45. (New) A programmable slow-cooker appliance comprising:
a heating unit including a bottom and a continuous sidewall extending from
said bottom, said bottom and said continuous sidewall defining a well-like chamber, said
continuous sidewall including an outer sidewall and an interior sidewall;
a heating element mounted to said heating unit and disposed between said
outer sidewall and said interior sidewall;
a cooking unit removably positioned in said well-like chamber;
a non-conductive housing mounted to said continuous sidewall of said heating
unit;
a programmable circuit positioned within said housing and electrically
connected to said heating element to electronically control and program cooking cycles and
temperature;
means for cooling said programmable circuit by convecting heat away
therefrom; and
a control panel electrically connected to said programmable circuit.

46. (New) A programmable slow-cooker appliance as described in claim 45
wherein said programmable circuit includes a microprocessor controller.

47. (New) A programmable slow-cooker appliance as described in claim 46
wherein said housing is comprised of a shield and a housing portion, said shield being

Applicant: DeCobert, et al.
Application Serial No.: 10/386,276
Filing Date: March 11, 2003
Docket No.: 717-675 CON
Page 6 of 9

interposed between said heating unit and said housing portion, said control panel being incorporated on said housing portion.

48. (New) A programmable slow-cooker appliance as described in claim 45 including means for automatically switching said heating element from a cook mode to a warm mode.

49. (New) A programmable slow-cooker appliance as described in claim 48 including a Triac electrically connected between said programmable circuit and said heating element.

50. (New) A programmable slow-cooker appliance as described in claim 49 including a heat sink positioned within said housing, said Triac including a heat sink tab in thermal contact with said heat sink.

51. (New) A programmable slow-cooker appliance as described in claim 45 wherein said means for cooking includes a lower vent in said housing for admitting relatively cool air to said housing and an upper vent in said housing for allowing the escape of relatively warm air from said housing.

Applicant: DeCobert, et al.
Application Serial No.: 10/386,276
Filing Date: March 11, 2003
Docket No.: 717-675 CON
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52. (New) A programmable slow-cooker appliance as described in claim 45 wherein said cooking unit is made from a ceramic material.

53. (New) A programmable slow-cooker appliance comprising:
a heating unit including a bottom and a continuous sidewall extending from said bottom, said bottom and said continuous sidewall defining a well-like chamber, said continuous sidewall including an outer sidewall and an interior sidewall;
a heating element mounted to said heating unit and disposed between said outer sidewall and said interior sidewall;
a housing mounted to said continuous sidewall of said heating unit;
a programmable circuit positioned within said housing including means for automatically switching said heating element from a cook mode to a lower temperature warm mode;
means for selecting a cooking temperature and cooking time;
means for ventilating said housing; and
a cooking unit removably positioned in said well-like chamber.

54. (New) A programmable slow-cooker appliance as described in claim 53 wherein said housing includes a shield and a housing portion, said shield being disposed between said heating unit and said housing portion, said housing portion including a control panel.

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Application Serial No.: 10/386,276
Filing Date: March 11, 2003
Docket No.: 717-675 CON
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55. (New) A programmable slow-cooker appliance as described in claim 54 including a heat sink positioned within said housing.

56. (New) A programmable slow-cooker appliance as described in claim 55 including a Triac positioned within said housing and electrically connected between said programmable circuit and said heating element, said Triac being in thermal contact with said heat sink.

57. (New) A programmable slow-cooker appliance as described in claim 53 wherein said housing is comprised of a thermoplastic material and said cooking unit is comprised of a ceramic material.

58. (New) A programmable slow-cooker appliance as described in claim 54 wherein said housing is comprised of a thermoplastic material and said cooking unit is comprised of a ceramic material.

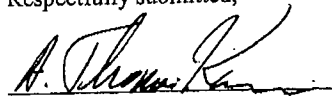
Applicant: DeCobert, et al.
Application Serial No.: 10/386,276
Filing Date: March 11, 2003
Docket No.: 717-675 CON
Page 9 of 9

REMARKS

Claims 34-58 have been added, and are the only claims now presented in the above-referenced application. All are fully supported by the patent specification as filed.

A terminal disclaimer is also enclosed.

Respectfully submitted,



A. Thomas Kammer
Registration No.: 28,226
Attorney for Applicant(s)

HOFFMANN & BARON, LLP
6900 Jericho Turnpike
Syosset, New York 11791
(516) 822-3550
ATK/nr

175391_1

EXHIBIT S

Notice of Allowability	Application No. <u>9/802 174</u>	Applicant(s) <u>DeCobert</u>
	Examiner <u>Paschall</u>	Group Art Unit <u>3742</u>

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance and Issue Fee Due or other appropriate communication will be mailed in due course.

☒ This communication is responsive to PAPERS FILED 08 27 /02

☒ The allowed claim(s) is/are 1-19

☒ The drawings filed on 03/08/01 are acceptable.

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.
☐ received in Application No. (Series Code/Serial Number) _____
☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE THREE MONTHS FROM THE "DATE MAILED" of this Office action. Failure to timely comply will result in ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

☐ Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.

☐ Applicant MUST submit NEW FORMAL DRAWINGS

☐ because the originally filed drawings were declared by applicant to be informal.
☐ including changes required by the Notice of Draftsperson's Patent Drawing Review, PTO-948, attached hereto or to Paper No. _____.
☐ including changes required by the proposed drawing correction filed on _____, which has been approved by the examiner.
☐ including changes required by the attached Examiner's Amendment/Comment.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the reverse side of the drawings. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

☐ Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Any response to this letter should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE/SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included.

Attachment(s)

☐ Notice of References Cited, PTO-892
☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
☐ Notice of Informal Patent Application, PTO-152
☐ Interview Summary, PTO-413
☐ Examiner's Amendment/Comment
☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
☐ Examiner's Statement of Reasons for Allowance

Mr. H. Paschall
Mark Paschall
Primary Examiner



UNITED STATES PATENT AND TRADEMARK OFFICE

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Washington, D.C. 20231
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NOTICE OF ALLOWANCE AND FEE(S) DUE

757 7590 09/20/2002
BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60611

EXAMINER	
PASCHALL, MARK H	
ART UNIT	CLASS-SUBCLASS
3742	219-506000

DATE MAILED: 09/20/2002

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/802,174	03/08/2001	James B. DeCobert	10367/1913	5948

TITLE OF INVENTION: PROGRAMMABLE SLOW-COOKER APPLIANCE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1280	\$0	\$1280	12/20/2002

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status is changed, pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above and notify the United States Patent and Trademark Office of the change in status, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check the box below and enclose the PUBLICATION FEE and 1/2 the ISSUE FEE shown above.

☐ Applicant claims SMALL ENTITY status.
See 37 CFR 1.27.

II. PART B - FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B - Fee(s) Transmittal should be completed and returned. If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** Box ISSUE FEE
Commissioner for Patents
Washington, D.C. 20231
Fax (703)746-4000

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 4 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Legibly Mark-up with any corrections to the Block 1)

757 7590 09/20/2002

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60611

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Box Issue Fee address above, or being facsimile transmitted to the USPTO, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/802,174	03/08/2001	James E. DeCobert	10367/1913	5948

TITLE OF INVENTION: PROGRAMMABLE SLOW-COOKER APPLIANCE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1280	\$0	\$1280	12/20/2002

EXAMINER	ART UNIT	CLASS-SUBCLASS
PASCHALL, MARK H	3742	219-506000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. Inclusion of assignee data is only appropriate when an assignment has been previously submitted to the USPTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) ☐ individual ☐ corporation or other private group entity ☐ government

4a. The following fee(s) are enclosed:

- ☐ Issue Fee
☐ Publication Fee
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s):

- ☐ A check in the amount of the fee(s) is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☐ The Commissioner is hereby authorized to charge the required fee(s), or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

Commissioner for Patents is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above.

(Authorized Signature)

(Date)

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

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TRANSMIT THIS FORM WITH FEE(S)



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/802,174	03/08/2001	James E. DeCobert	10367/1913	5948
757	7590	09/20/2002	EXAMINER	
BRINKS HOFER GILSON & LIONE P.O. BOX 10395 CHICAGO, IL 60611			PASCHALL, MARK H	
			ART UNIT	PAPER NUMBER
			3742	
DATE MAILED: 09/20/2002				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
 (application filed on or after May 29, 2000)

The patent term adjustment to date is 0 days. If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the term adjustment will be 0 days.

If a continued prosecution application (CPA) was filed in the above-identified application, the filing date that determines patent term adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) system. (<http://pair.uspto.gov>)



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER				
PASCHALL, MARK H				
ART UNIT			PAPER NUMBER	
757 7590 09/20/2002			3742	
BRINKS HOFER GILSON & LIONE P.O. BOX 10395 CHICAGO, IL 60611 UNITED STATES				

DATE MAILED: 09/20/2002

Notice of Possible Fee Increase on October 1, 2002

If a reply to a "Notice of Allowance and Fee(s) Due" is filed in the Office on or after October 1, 2002, then the amount due may be higher than that set forth in the "Notice of Allowance and Fee(s) Due" since there may be an increase in fees effective on October 1, 2002. See Revision of Patent and Trademark Fees for Fiscal Year 2003; Notice of Proposed Rulemaking, 67 Fed. Reg. 30634, 30636 (May 7, 2002). Although a change to the amount of the publication fee is not currently proposed for October 2002, if the issue fee or publication fee is to be paid on or after October 1, 2002, applicant should check the USPTO web site for the current fees before submitting the payment. The USPTO Internet address for the fee schedule is: <http://www.uspto.gov/main/howtofees.htm>.

If the issue fee paid is the amount shown on the "Notice of Allowance and Fee(s) Due," but not the correct amount in view of any fee increase, a "Notice to Pay Balance of Issue Fee" will be mailed to applicant. In order to avoid processing delays associated with mailing of a "Notice to Pay Balance of Issue Fee," if the response to the Notice of Allowance and Fee(s) due form is to be filed on or after October 1, 2002 (or mailed with a certificate of mailing on or after October 1, 2002), the issue fee paid should be the fee that is required at the time the fee is paid. If the issue fee was previously paid, and the response to the "Notice of Allowance and Fee(s) Due" includes a request to apply a previously-paid issue fee to the issue fee now due, then the difference between the issue fee amount at the time the response is filed and the previously paid issue fee should be paid. See Manual of Patent Examining Procedure, Section 1308.01 (Eighth Edition, August 2001).

Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.

EXHIBIT M

**THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS**

THE HOLMES GROUP, INC.,

Plaintiff,

vs.

WEST BEND HOUSEWARES, LLC and
FOCUS PRODUCTS GROUP, LLC,

Defendants.

Civil Action No. 05-CV-11367 WGY
(Alexander, M.J.)

**DECLARATION OF BARRY N. FEINBERG
IN SUPPORT OF DEFENDANTS' MOTION FOR
PARTIAL SUMMARY JUDGMENT OF NONINFRINGEMENT**

I, Barry N. Feinberg, Ph.D., P.E., hereby give the following declaration made on personal knowledge, and if called to testify, would state:

1. I am a registered professional engineer, licensed to practice engineering in the states of Illinois and Indiana, a Life Fellow of the Institute of Electrical and Electronics Engineers (IEEE), and a Fellow of the American Institute for Medical and Biological Engineering. I have worked as a consulting engineer for thirty-three (33) years and as a professor of electrical engineering.

2. I hold a Ph.D. degree in Engineering from the Case School of Engineering, Case Western Reserve University, a Masters of Electrical Engineering degree from the University of Louisville, and Bachelor of Science degrees in Electrical Engineering and Mathematics from the University of Michigan.

3. I have written a university textbook, Applied Clinical Engineering, that covers the subject of the engineering of electrical devices. I have edited five (5) published books in engineering, authored sixteen (16) papers in professional journals, and presented forty three (43)

technical papers at engineering conferences. I am a past member of the Accreditation Board for Engineering and Technology (ABET) Accreditation Team for accrediting university programs in Electrical and Computer Engineering.

4. A copy of my Curriculum Vitae is attached as Appendix A.

5. I have been asked to describe the structure and operation of the West Bend Housewares, LLC programmable “Crockery” slow cooker Model No. 843896 as its features relate to U.S. Patent Nos. 6,573,483 and 6,740,855. In performing this task, I read both patents and their prosecution histories, I examined the subject West Bend slow cooker, including assembled, disassembled, and sectioned units cut in half, I read pertinent parts of the West Bend instruction manual for the cooker, and I took the photographs that appear below to illustrate my description of the slow cooker. Annotations to my photographs were added by defendants’ counsel in consultation with me. Enlarged copies of Photos 1-11 are appended to the end of this declaration for ease of viewing.

6. The West Bend slow cooker comprises a heating unit that holds a removable ceramic cooking vessel (shown in Photo 3 below) in which food is cooked. The slow cooker is operated by a user through a control panel positioned on the front of the heating unit as shown in Photos 1 and 2 below.



Photo 1 – Front of Cooker



Photo 2 – Side of Cooker



Photo 3 – Ceramic Cooking Vessel

7. As can be seen by reference to Photos 4 and 5 below, the heating unit is formed by exterior and interior sidewalls that are spaced apart to define a cavity between them. A base supports the outer sidewall and closes the bottom of the heating unit. The interior sidewall and interior bottom of the heating unit form a heating well to receive the ceramic cooking vessel. A heating element is secured around the circumference of the interior sidewall of the heating well within the heating unit, as shown in Photos 4 and 5.

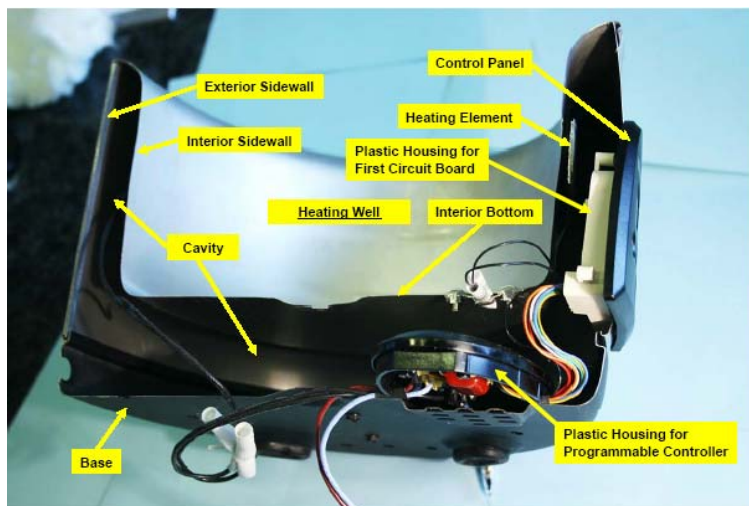


Photo 4 – Sectioned View From Underside of Base

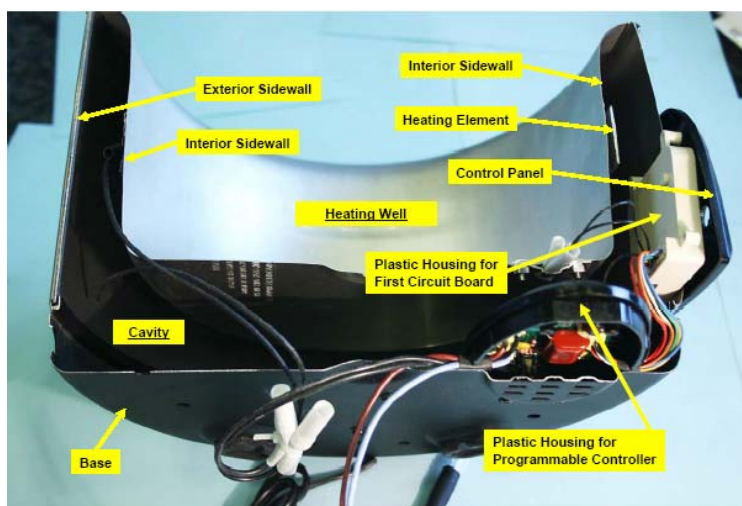


Photo 5 - Sectioned View From Underside of Base

8. As explained in more detail below and as can be seen in Photo 6 below, a user of the cooker can select cooking times and temperatures by pushing buttons on the control panel. As shown in Photos 6 and 7 below, there are no electronic or electrical components mounted to the control panel. The control panel also has a transparent window for viewing the time and temperature.



Photo 6 – Front View of Control panel

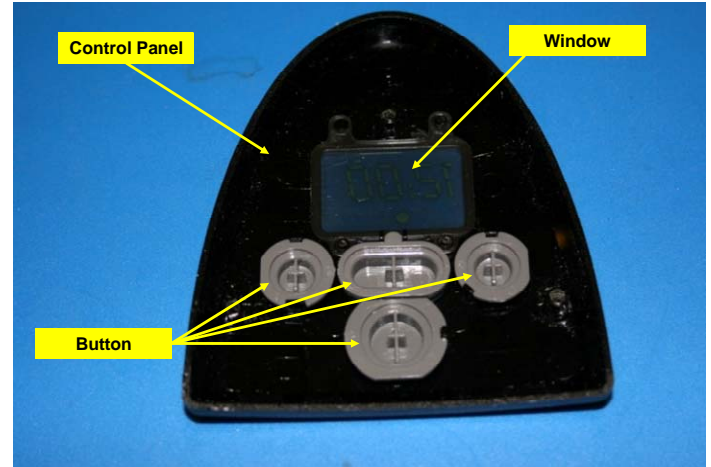


Photo 7 – Rear View of Control Panel

9. As shown in Photo 8, when the control panel buttons are pushed, they actuate input switches mounted on a first circuit board, which is located behind the control panel and inside the heating unit. Each switch on the first circuit board corresponds to and is positioned behind a push button on the control panel.

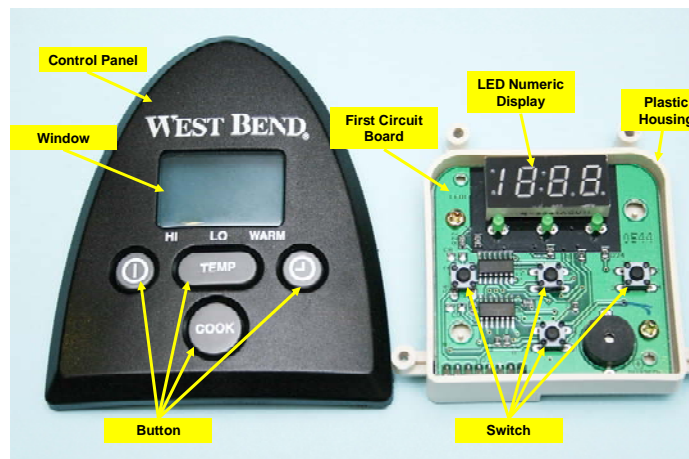


Photo 8 – Control Panel and First Circuit Board in its Housing

10. The first circuit board is mounted to the inside of a plastic housing that is, in turn, mounted to the inside of the heating unit. The first circuit board lies entirely inside of the heating unit. The first circuit board is not mounted to the control panel. The control panel is mounted to the outside of the heating unit, independent of the first circuit board and its housing. These features may be seen by reference to Photos 4, 5, and 8 above.

11. The switches on the first circuit board provide the user-selected cooking information (in the form of electrical signals) to a programmable controller located on a second circuit board. (See Photo 9.) Wires connect the first circuit board to the second circuit board, as shown in Photo 10. The programmable controller on the second circuit board is shown in Photo 9.

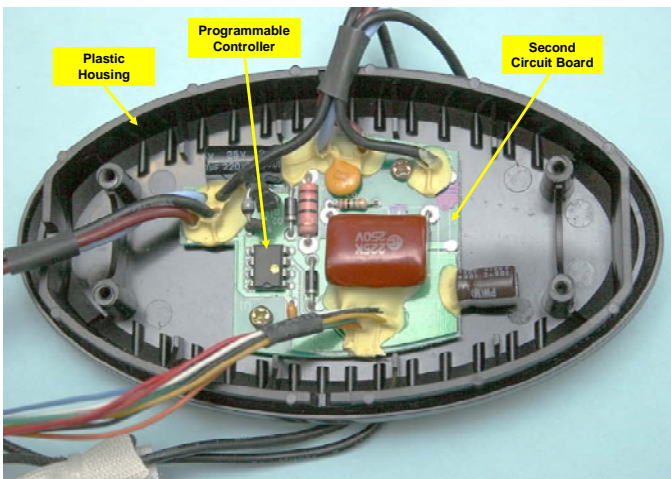


Photo 9 – Second Circuit Board With Programmable Controller, Viewed From Underside Of Programmable Controller Housing

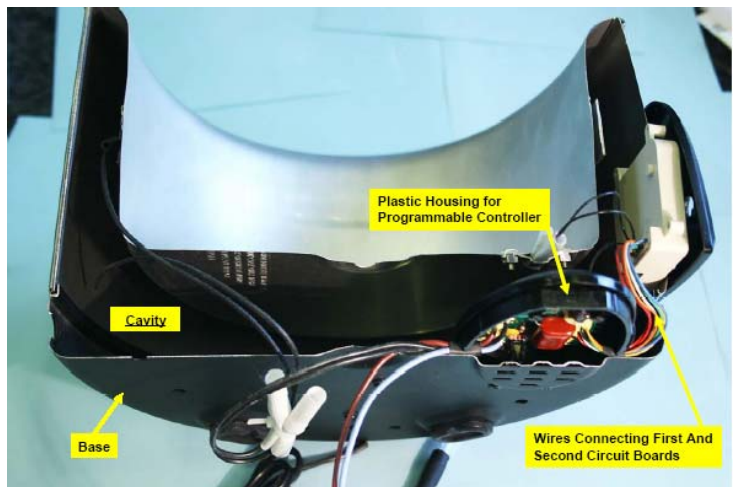


Photo 10 – Cut-Away Side View of Cooker Showing Underside of Heating Unit Base

12. As can be seen by reference to Photos 9 and 10 above, the second circuit board and the programmable controller are positioned within a plastic housing that is mounted to and located entirely within the base of the heating unit. Thus, the programmable controller and the housing in which it is mounted lie entirely inside heating unit.

13. Neither the first circuit board (shown in Photo 8 above) nor any of the components mounted on it is programmable or includes any circuitry or logic to control or program the cooking cycles and temperatures of the cooker. The first circuit board and the components attached to it are incapable of automatically switching the heating element from a cook mode to a lower temperature warm mode at the end of a set cooking time. Those functions are performed by the programmable controller (which, as noted, is mounted to the inside of the heating unit). The programmable controller of the West Bend cooker is the only component of the West Bend cooker that is programmed to operate the heating element in accordance with the selected cooking parameters (i.e., cooking time and temperature) and to automatically lower the cooking temperature to a warm mode after the selected time elapses. The first circuit board and the components mounted thereon act as the interface between the user and the programmable controller.

14. As can be seen by reference to Photo 11 below, a thermal insulation pad is placed between the heating well and the housings for both the first circuit board and the second circuit board. The thermal insulation pad is designed to prevent the electronic components from overheating while the cooker operates.

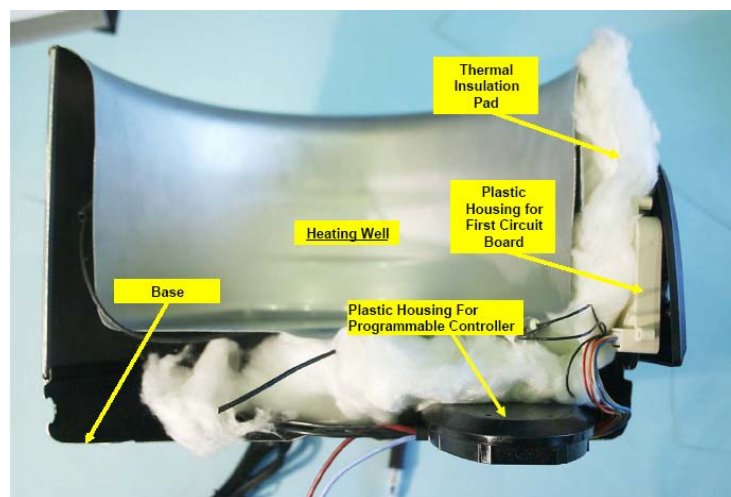


Photo 11 – *Cut-Away Side View of Cooker Showing Thermal Insulation Pad*

I declare under penalty of perjury that the foregoing is true and correct.

Executed on July 18, 2006.

/s/ Barry N. Feinberg

Barry N. Feinberg, Ph.D., P.E., I.E.E.E. Fellow



Photo 1 – *Front of Cooker*



Photo 2 – Side of Cooker



Ceramic
Cooking
Vessel

Photo 3 – *Ceramic Cooking Vessel*

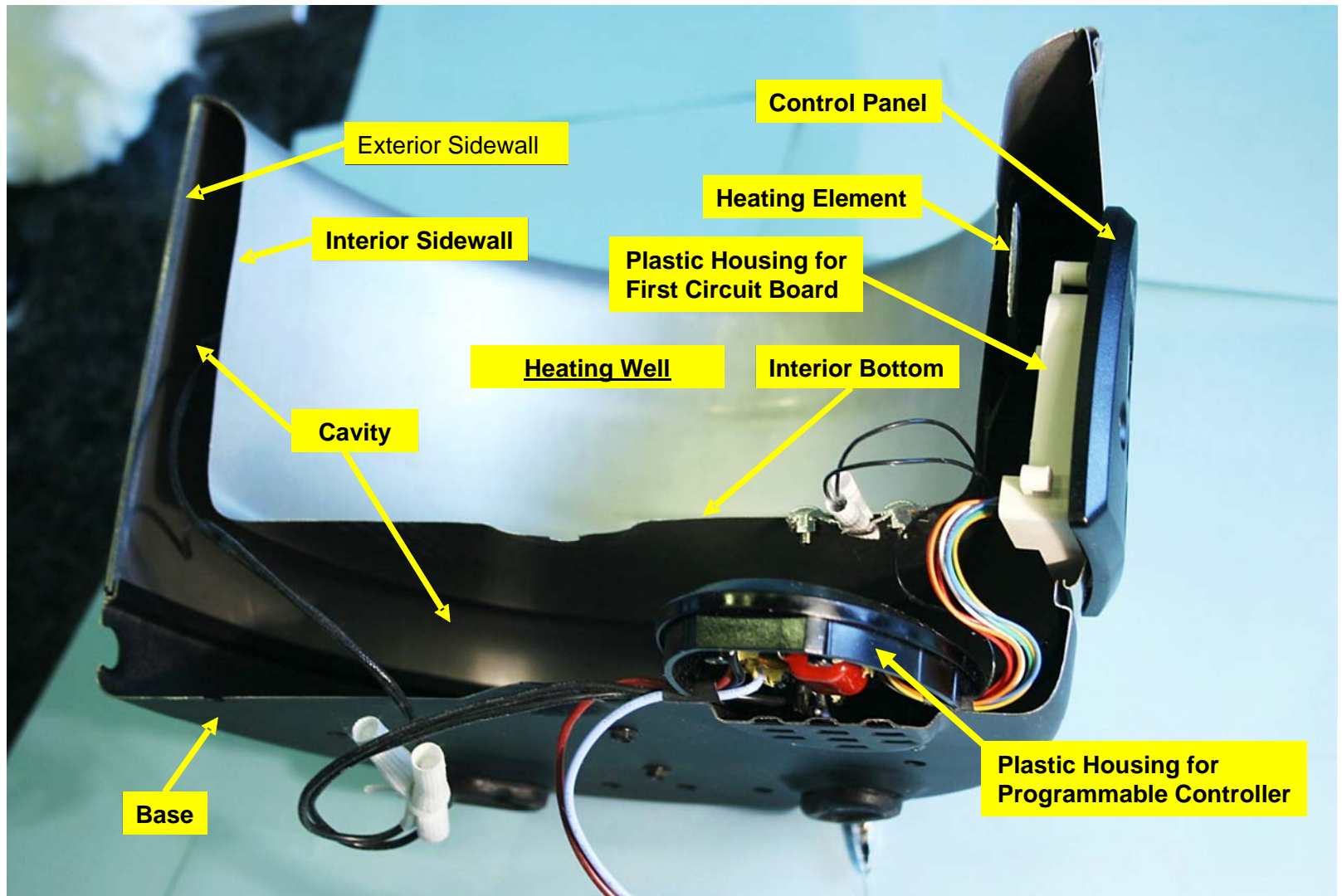


Photo 4 – *Sectioned View From Underside of Base*

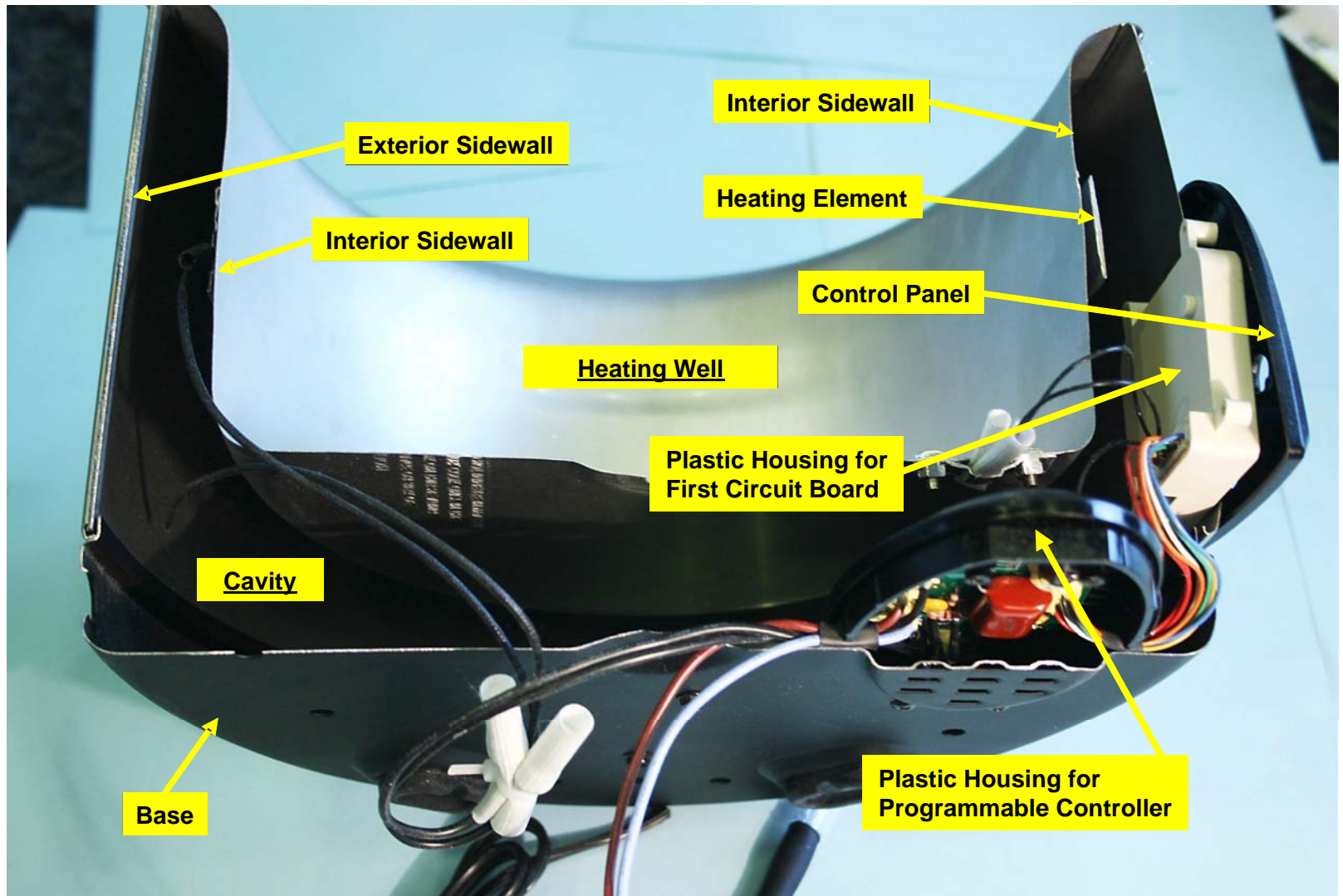


Photo 5 – Sectioned View From Underside of Base

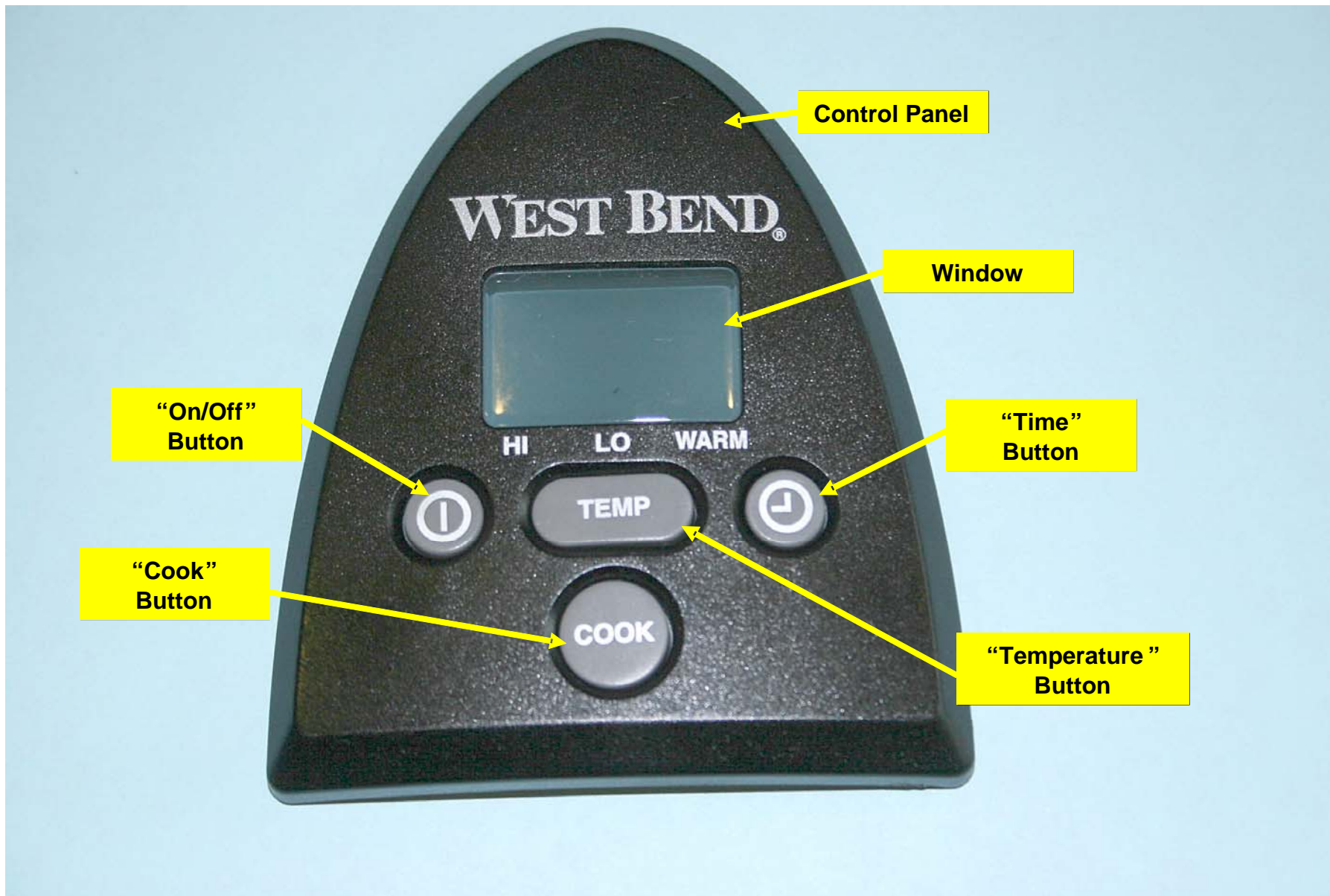


Photo 6 – *Front View of Control panel*

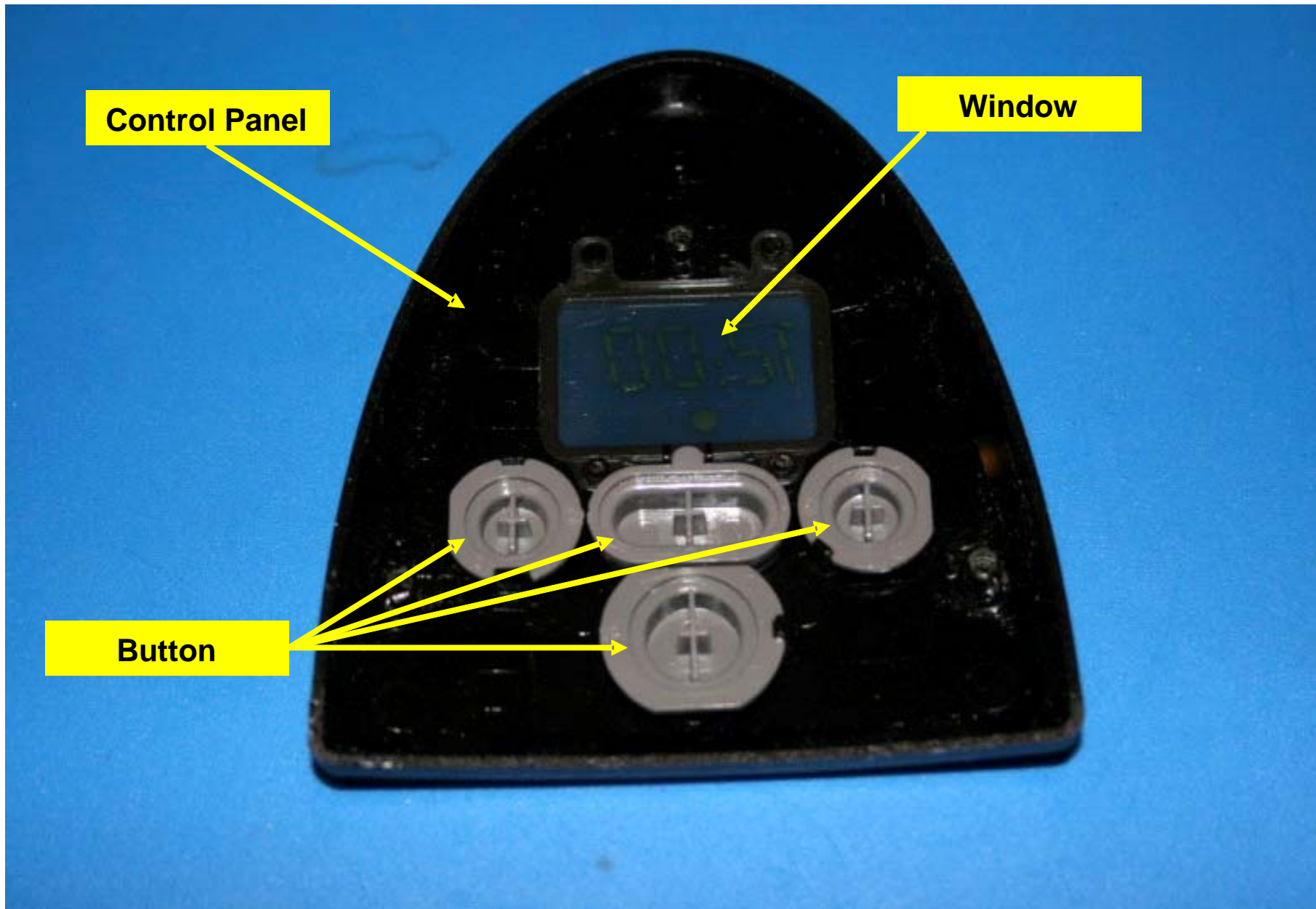


Photo 7 – *Rear View of Control Panel*

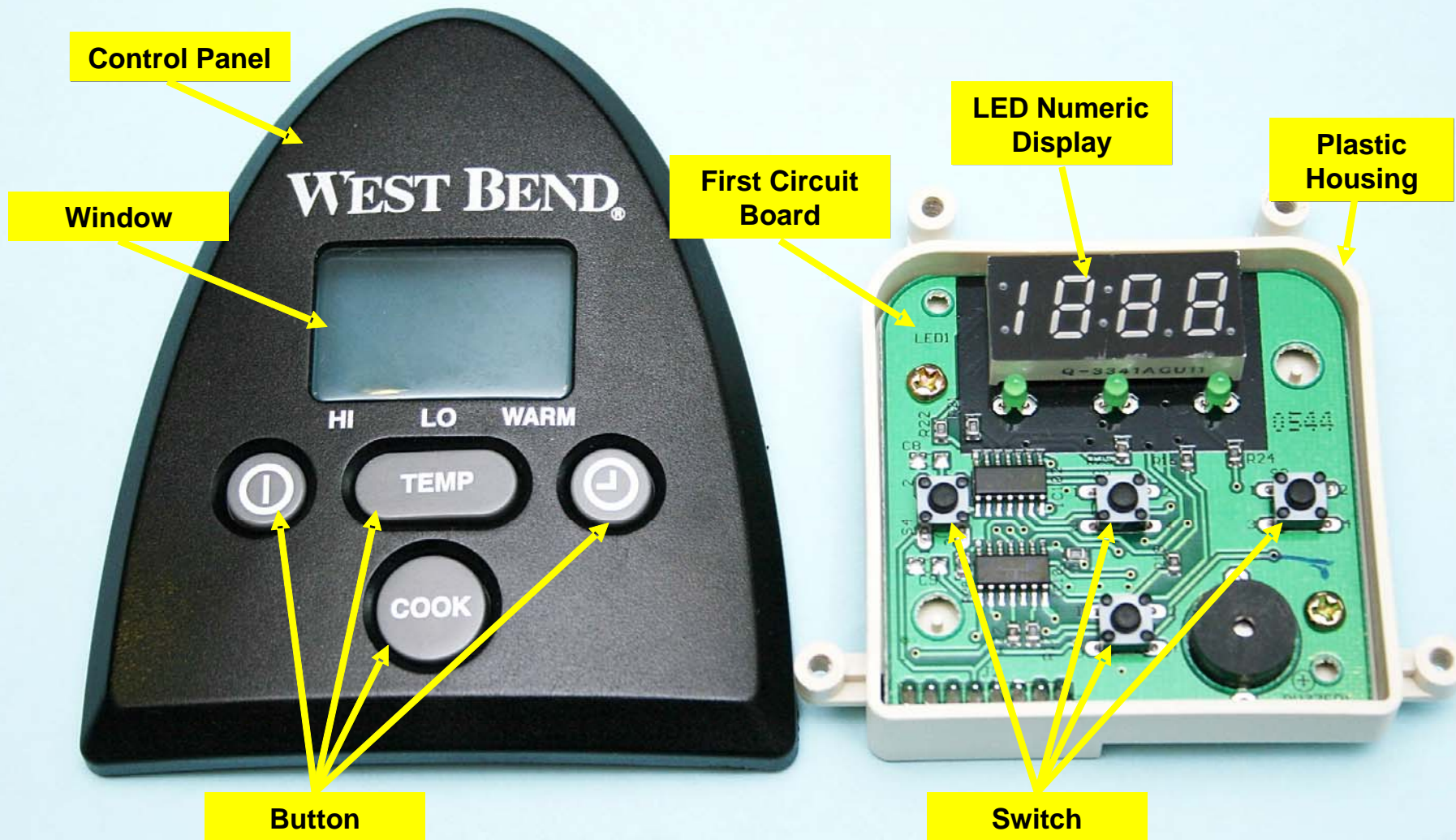


Photo 8 – Control Panel and First Circuit Board in its Housing

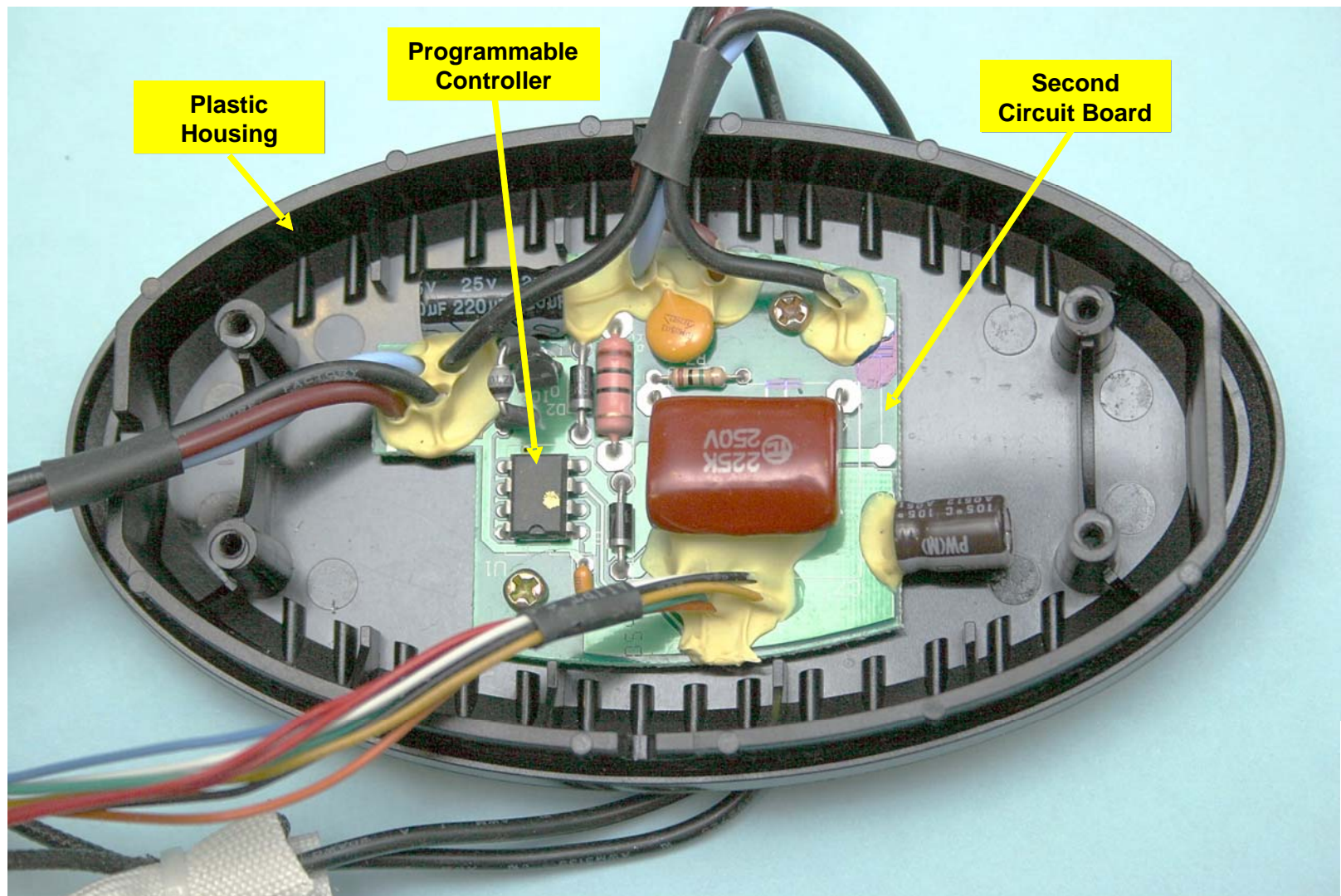


Photo 9 – Second Circuit Board With Programmable Controller, Viewed From Underside Of Programmable Controller Housing

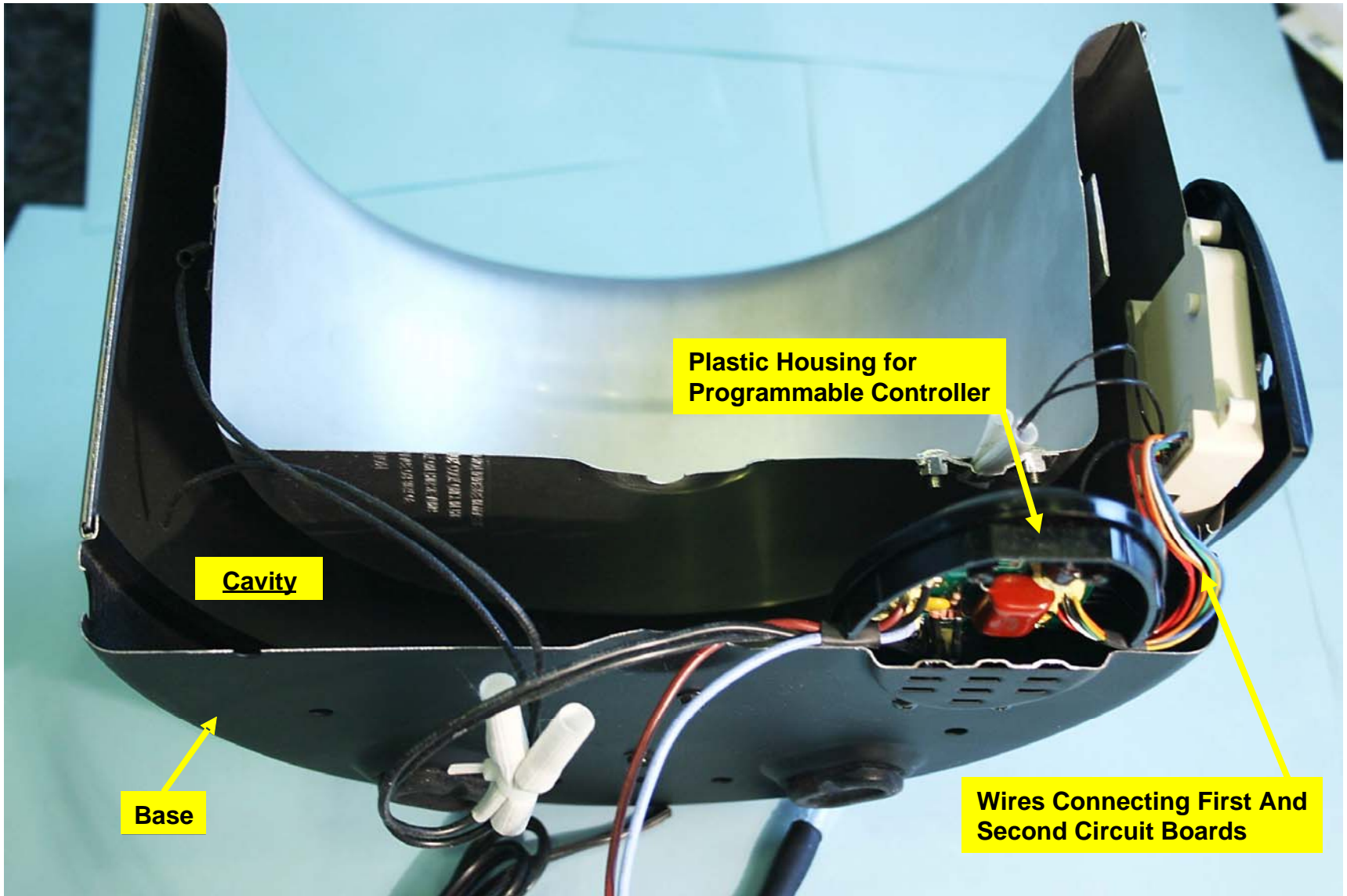


Photo 10 – Cut-Away Side View of Cooker
Showing Underside of Heating Unit Base



Photo 11 – *Cut-Away Side View of Cooker Showing Thermal Insulation Pad*

exhibit a to EXHIBIT M



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Education

Ph.D. Engineering Case Western Reserve Univ. (Case School of Engineering)
M.E.E. University of Louisville (Speed School of Engineering)
B.S.E.E. University of Michigan
B.S.E. Mathematics University of Michigan

Professional Experience

1986 - Present **Principal Consulting Engineer**, Center for Engineering Analysis Chicago, Illinois
(International Professional Engineering consultant for universities, hospitals,
industries, insurance companies and the legal professions.)

1981 - 1986 **Senior Corporate Scientist**, Kendall Company, Barrington Research Center,
Barrington, Illinois (A subsidiary of the Colgate-Palmolive Company)

1976 - 1981 **Associate Professor of Electrical and Computer Engineering** (Tenure), Purdue
University. West Lafayette, Indiana

Director - Clinical and Medical Radiation Engineering Programs, Purdue
University, West Lafayette, Indiana.

1972 - 1976 **Associate Professor of Electrical and Computer Engineering** (Tenure),
Cleveland State University, Cleveland, Ohio

Director-Clinical Engineering Program

Head - College of Engineering Computing and Plotting Facility, The Cleveland State
University, Cleveland, Ohio

1969 - 1972 **Assistant Professor** of Electrical Engineering, The Cleveland State University.
Cleveland, Ohio

1968 - 1969 **Visiting Professor**, Department of Electrical Engineering,
University of Edinburgh, Edinburgh, Scotland

1964 - 1968 **Instructed** in Electronic Circuit Analysis and Design, Department of Electrical
Engineering, Case School of Engineering, CWRU, Cleveland, Ohio

1962 - 1964 **Instructor of Mathematics**, Speed **Scientific** School, Department of Engineering
Mathematics, University of Louisville, Louisville, Kentucky

Professional Credentials

Registered Professional Engineer - Illinois & Indiana

Board Certified in Clinical Engineering



Resumé - Barry N. Feinberg, Ph.D, P.E.

Honors

Recipient - IEEE Third Millennium Medal Award
Fellow - Institute of Electrical & Electronics Engineers (IEEE)
Fellow - American institute for Medical and Biological Engineering
IEEE/Engineering in Medicine & Biology Society - Service Award
Senior Distinguished Faculty Award - Cleveland State University

Books Published

- [1] Barry N. Feinberg, **Applied Clinical Engineering**, Prentice-Hall Inc., Englewood Cliffs, New Jersey, 1986
- [21] Barry N. Feinberg & James C. Lin (eds), **Frontiers of Engineering and Computing in Health Care**, Proceedings of the 7th Annual Conference of the IEEE/Engineering in Medicine and Biology Society, September 27-30, 1985, Institute of Electrical and Electronic Engineer, Piscataway, NJ, 1985
- [3] Barry N. Feinberg, **Engineering Principles of Medical X-Ray Systems**, Association for the Advancement of Medical Instrumentation, Short Course Notes, 1982
- [4] Barry N. Feinberg and David Fleming (Editors-in-Chief), **CRC Handbook of Hospital Safety**, Paul E. Stanley (ed), CRC Press, Boca Raton, Florida, 1981
- [5] Barry N. Feinberg, (ed), **CRC Handbook of Clinical Engineering**, CRC Press, Boca Raton, Florida, 1980
- [6] Barry N. Feinberg and David Fleming, (eds), **CRC Handbook of Engineering in Medicine and Biology**, Vol. I sect. B - Measurement and Instrumentation, CRC Press, Boca Raton, Florida, 1978
- [7] Barry N. Feinberg and David Fleming, (eds), **CRC Handbook of Engineering in Medicine and Biology** Vol. I sect. A, CRC Press, Cleveland, Ohio 1976

Publications

- 1. George Farrell, Barry Feinberg, "The Art of Protecting Electrical Systems: Introduction and Scope", Consulting-Specifying Engineer, August 10, 2005
- 2. Barry N. Feinberg, "Design, Manufacturing, and Testing of Penile Implants" Proceedings of the Association of Trial Lawyers of America, Vol.11, pp 2197-2209, New York, July 16-18, 1995
- 3. Barry N. Feinberg, "A University Based Clinical Engineering Education Program", Proceedings of the 1990 IEEE Colloquium in South America, August 31 - September 15, 1990
- 4. Barry N. Feinberg, "Use of Localized Hyperbaric Oxygen Therapy in Wound Healing", Proceedings of the 11th Annual International Conference of the IEEE/Engineering in Medicine & Biology Society, Nov. 9-12, 1989
- 5. Vernon Newhouse, Barry N. Feinberg, et. al., "Clinical Engineering as an Academic Discipline", Journal of Clinical Engineering, Vol. 10, No. 3, July-September, 1985



Resumé - Barry N. Feinberg, Ph.D, P.E.

6. Barry N. Feinberg, Michael Bernstein and Paul Benkeser, "Evaluation of Oxygen Regulator Tests", U.S. Air Force School of Aerospace Medicine, Review of Procedures/Requirements for Life Support Test and Evaluations of Oxygen Delivery Systems in High Performance Aircraft, February, 1980
7. Barry N. Feinberg, and Michael Bernstein, "Physiological Analysis of O₂ Regulator Tests", U.S. Air Force School of Aerospace Medicine, Review of Procedures/Requirements for Life Support Test and Evaluations of Oxygen Delivery Systems in High Performance Aircraft", February, 1980
8. Barry N. Feinberg, "Clinical Engineering Practicum - A New Approach in Clinical Engineering Education", Journal of Clinical Engineering, Vol.4, No. 2: 155-158, April - June, 1979
9. Barry N. Feinberg, "Professionalism in Clinical Engineering" editorial, Journal of Clinical Engineering, Vol. 3, No. 2, 1978
10. Barry N. Feinberg and John Petre, "A Continuous Leakage Current Monitor for Medical Instrumentation in Hospitals", Journal of Clinical Engineering, Vol. 2: No. 2, 136-141, April-June, 1977
11. John Busser and Barry Feinberg, "Measurements", Chapter in Handbook of Engineering in Medicine and Biology, Barry Feinberg and David Fleming, (eds), Vol.1, sec. A, CRC Press, Cleveland, Ohio, 1976
12. Leo Link and Barry N. Feinberg, "Electrical Safety in Hospitals", The Journal of Hospital Research, Vol. 10, No. 1: 1- 18, November, 1976
13. Barry N. Feinberg and James Schoeffler, "Computer Optimization Methods Applied to Medical Diagnosis", Computers in Biology and Medicine, Vol. 5: 3 -19, June, 1975
14. Barry N. Feinberg and Edward H. Chester, "A Dynamic Model of Pulmonary Mechanics to Simulate a Panting Maneuver", Bulletin De Physio-Pathologie Respiratoire, Vol. 8: No. 2, pp 6-18, Nov., 1972
15. Barry N. Feinberg and Edward H. Chester, "Plethysmograph Instrumentation for Estimating Bronchial Compliance", J. Assoc. Adv. Med. Instr., Vol. 5: No. 6, 1971
16. Barry N. Feinberg and Edward H. Chester, "The Effect of Small Airways Resistance on Pressure Flow Loops", American Review of Respiratory Disease, Vol. 103, No. 6, June 1971
17. Barry N. Feinberg, et. al., "Parameter Estimation Techniques as a Diagnostic Aid in the Determination of Obstructive Lung Disease", Biomedical Sciences Instrumentation, Vol. 7, 1970
18. Barry N. Feinberg, et. al., "A Computer-Aided Approach to the Diagnosis and Detection of Obstructive Lung Disease", American Review of Respiratory Disease, Vol. 101, 1970
19. Barry N. Feinberg, et. al., "Parameter Estimation: A Diagnostic Aid for Lung Disease", Instrumentation Technology, Vol. 17, pp 40-46, 1970



Resumé - Barry N. Feinberg, Ph.D, P.E.

Technical and Professional Conference Presentations

- [1] Barry N. Feinberg, "Public Education Programs on the Dangers of Overhead Power Lines", University of Chicago Symposium, Electrical Injury: A Multidisciplinary Approach to Therapy, Prevention & Rehabilitation", June 11 - 12, 1993, Chicago, Illinois
- [2] Barry N. Feinberg, "Power Systems Codes, Standards and Public Safety in the Prevention of Injury from High Voltage Electricity", The University of Chicago, Departments of Surgery & Anatomy and The Energy Laboratory of The Massachusetts Institute of Technology: Symposium on Electrical Trauma, The University of Chicago, July 13-14, 1989, Chicago, Illinois
- [3] Barry N. Feinberg, Session Chair "Computers in Clinical Engineering Management" 12th International Conference of IEEE/Engineering in Medicine and Biology Society, Nov. 1-4, 1990, Philadelphia, PA
- [4] Barry N. Feinberg, "A University Based Clinical Engineering Education Program" International Workshop on Clinical Engineering, Weimar, Germany, May 7-9, 1990 (Invited)
- [5] Barry N. Feinberg, "The National Electrical Safety Code in Electrical Trauma Prevention", Joint Clinical and Bioengineering Panel, Symposium on Electrical Trauma, The University of Chicago, July 13-14, 1989
- [6] Barry N. Feinberg, "The Engineer as Consultant and Business Person", Round table on Engineers as Consultants and Entrepreneurs, 10th Annual Conference of IEEE/Engineering in Medicine and Biology Society, New Orleans, Louisiana, November, 1988
- [7] Barry N. Feinberg, "Clinical Engineering: A focused Biomedical Engineering and Career Program", World Congress on Medical Physics and Biomedical Engineering, San Antonio, Texas, August, 1988
- [8] Barry N. Feinberg, "The Theory and Practice of the Use of Electric and Magnetic Fields in the Acceleration of Soft and Hard Tissue Healing", Kendall Company Scientific Seminar, October, 1985
- [9] Barry N. Feinberg, "The Measurement of Arterial Blood Pressure Using the Vascular Unloading Principle via Electromechanical Feedback Control and Infrared Sensing", Kendall Company Scientific Research Seminar, June, 1984
- [10] Barry N. Feinberg, "Undergraduate Biomedical Engineering Curricula", Session Chairman, 92nd Annual Conference, American Society for Engineering Education Annual Conference, Salt Lake City, Utah, June, 1984
- [11] Barry N. Feinberg, "Is Professional Clinical Engineering Education Academic Enough for the University", 92nd Annual Conference, American Society for Engineering Education Annual Conference, Salt Lake City, Utah, June, 1984
- [12] Barry N. Feinberg, "Selecting a Biomedical Engineering Program to Meet Career Objectives", Association For the Advancement of Medical Instrumentation, 19th Annual Conference, Washington, D.C., April, 1984, (invited)
- [13] Barry N. Feinberg, "The Effect of Localized High Pressure Oxygen on Wound Healing", Colgate/Kendall Research and Development Colloquium, October, 1983



Resumé - Barry N. Feinberg, Ph.D, P.E.

- [14] Barry N. Feinberg, "Professional Engineering Registration for Biomedical Engineers", Session Chairman, 91 st Annual Conference, American Society for Engineering Education, Rochester Institute of Technology, June, 1983
- [151] Barry N. Feinberg, "Medical Imaging" Session Chairman, Fourth Annual Conference, IEEE/Engineering in Medicine and Biology Society, Philadelphia, Pennsylvania, Sept., 20-21, 1982
- [16] Barry N. Feinberg, "Electrical Defibrillation", 8th Annual Veterinary Surgical Forum, Chicago, Illinois, October, 1980. (invited)
- [17] Barry N. Feinberg, "Electrical Shock Hazard to the Cardiovascular System in the Surgical Setting", 8th Annual Veterinary Surgical Forum, Chicago, Illinois, October, 1980. (Invited)
- [18] Barry N. Feinberg, "Monitoring the Surgical Patient: Equipment, Uses of Equipment and Cost", 8th Annual Veterinary Surgical Forum, Chicago, Illinois, October, 1980. (Invited)
- [19] Barry N. Feinberg, "Imagining Methods", Session Co-Chairman, 2nd Annual Conference, IEEE/Engineering in Medicine and Biology Society, Washington, D.C., September, 1980
- [20] Barry N. Feinberg, "Workshop for Biomedical Engineering Education Department Heads", Annual Conference of The Association for the Advancement of Medical Instrumentation, (AAMI), San Francisco, California, April, 1980
- [21] Barry N. Feinberg, "Radiology - A New Direction in Clinical Engineering Education", Annual Conference of The Association for the Advancement of Medical Instrumentation, (AAMI), April, 1980
- [22] Barry N. Feinberg, "Clinical Engineering and Professional Development" Session Chairman, Annual Conference of The Association for the Advancement of Medical Instrumentation, April, 1980
- [23] Barry N. Feinberg, "Clinical Engineering, A Vital Factor in Technology Management in the U.S. Health Care Delivery System", XII International Conference on Medical and Biological Engineering, Jerusalem, Israel, August 19-24, 1979 (Invited Paper)
- [24] Barry N. Feinberg, "The Changing Role of the Clinical Engineer", Annual Conference of the Association for the Advancement of Medical Instrumentation, (AAMI), Las Vegas, Nevada, May, 1979
- [25] Barry N. Feinberg, "Professional Development and Education in Clinical Engineering", Session Chairman, Annual Conference of the Association for the Advancement of Medical Instrumentation, (AAMI), Las Vegas, Nevada, May, 1979
- [26] Barry N. Feinberg, "Registration, Licensing, Certification and Accreditation for Biomedical Engineering", Session Chairman, American Society for Engineering Education Annual Conference, Vancouver, B.C., June, 1978
- [27] Barry N. Feinberg and Ron Tolley "A Hybrid Computer Approach to Parameter Estimation as Applied to Obstructive Lung Disease", 31 st Annual Conference on Engineering in Medicine and Biology, Atlanta, Ga., October, 1978



Resumé - Barry N. Feinberg, Ph.D, P.E.

- [28] Barry N. Feinberg, "Clinical Engineering Practicum - A New Approach in Clinical Engineering Education", 30th Annual Conference on Engineering in Medicine and Biology, Los Angeles, CA, November, 1977
- [29] Barry N. Feinberg, "Clinical Engineering Internships in Locations Remote from the University", 12th Annual Conference of the American Association for the Advancement of Medical Instrumentation, (AAMI), March, 1977
- [30] John Petre and Barry Feinberg, "A Magnetic Induction Method for Continuous Monitoring of Low-Level Leakage Current", 11th Annual Conference of the American Association for the Advancement of Medical Instrumentation, (AAMI), Atlanta, Georgia, March, 1976
- [31] Gale Messerman and Barry Feinberg, "Legal Implications of Clinical Engineering Practice", 11th Annual Conference of the American Association for the Advancement of Medical Instrumentation, (AAMI), Atlanta, Georgia, March, 1976
- [32] Barry N. Feinberg, "Clinical Engineering Internships - Their Initiation and Operation as Part of a Clinical Engineering Educational Program", 11th Annual Conference of the American Association for the Advancement of Medical Instrumentation, Atlanta, Georgia, March, 1976
- [33] Gordon Jacobs and Barry Feinberg, "An Analysis for Artifact Compensation in the Body Plethysmograph", 11th International Conference on Medical and Biological Engineering, Ottawa, Canada, August, 1976
- [34] Barry N. Feinberg, "Clinical Engineering Internships - Two Years Experience In Their Initiation and Operation", 28th Annual Conference on Engineering in Medicine and Biology, New Orleans, Louisiana., September, 1975
- [35] John Petre and Barry Feinberg, "A Continuous Leakage Current Monitor for Medical Electronic Devices", 27th Annual Conference on Engineering in Medicine and Biology, Philadelphia, Pennsylvania, October, 1974
- [36] Zolton Dudevsky and Barry Feinberg, "A Plethysmographic Method for the Estimation of Bronchial Compliance", 27th Annual Conference on Engineering in Medicine and Biology, Philadelphia, Pennsylvania, October, 1974
- [37] Barry N. Feinberg, "Computer Aided Medical Diagnosis" 83rd Annual Meeting of the Ohio Academy of Science, Wooster, Ohio, April, 1973
- [38] Barry N. Feinberg, Edward Chester, and Michael Pechura, "A Digital Spectrum Analysis of Pressure-Flow Data", 26th Annual Conference on Engineering in Medicine and Biology, Minneapolis, Minnesota, September, 1973
- [39] Gordon Jacobs and Barry Feinberg, "Analysis of Thermal and Humidification Artifacts in the Body Plethysmograph", 26th Annual Conference on Engineering in Medicine and Biology, Minneapolis, Minnesota, September, 1973
- [40] Barry Feinberg and Edward Chester, "Airway Simulation to Analyze Pressure-Flow Loops", 24th Annual Conference on Engineering in Medicine and Biology, Las Vegas, Nevada, October, 1971



Resumé - Barry N. Feinberg, Ph.D, P.E.

- [41] Barry N. Feinberg, "A Dynamic Model of Pulmonary Mechanics to Simulate A Panting Maneuver", The XXVth International Congress of Physiological Sciences, Symposium of Models in Ventilatory Mechanics, Paris-Creteil, France, July, 1971. (Invited Paper)
- [42] Barry N. Feinberg, et. al., "A Model of Pulmonary Mechanics Applied to the Body Plethysmograph", 28th Armed Forces Pulmonary Disease Research Conference, 1969
- [43] Barry N. Feinberg, et. al., "A Model of Pulmonary Mechanical Dynamics to Describe a Panting Maneuver", 21 st Annual Conference on Engineering in Medicine and Biology, Houston, Texas, November, 1968

Invited Lectures

- [1] Barry N. Feinberg, "Professional Registration & Certification for the Clinical Engineer", Midwest Biomedical Society, Medical Technology Symposium, Oak Brook, Illinois, March, 1983
- [2] Barry N. Feinberg, "Clinical Engineering: A Focused Biomedical Engineering Program", Biomedical Engineering and Science Institute, Drexel University, May, 1982
- [3] Barry N. Feinberg, "The Clinical Engineer, A New Member in the Health Care Profession", Indiana Society of Hospital Engineers, May 1977
- [4] Barry N. Feinberg, "The Role of the Clinical Engineer in the Purchase of Hospital Medical Equipment", Indiana Hospital Purchasing Management Association, June 1977
- [5] Barry N. Feinberg, "Understanding the New Regulations on Hospital and Medical Equipment", Purdue University Clinical Engineering Conference, July, 1977
- [6] Barry N. Feinberg, "The Emergence of the Clinical Engineer in the United States", Purdue University Clinical Engineering Conference, July, 1977
- [7] Barry N. Feinberg, "The Development of Clinical Engineering Programs in the United States" Universite de Technologie de Compi6gne, Compi6gne, France, January, 1975
- [8] Barry N. Feinberg, "Optimization for Parameter Estimation used for Medical Diagnosis", Academish Ziekenhuis Sint-Rafael, Leuven, Belgium, August, 1973
- [9] Barry N. Feinberg, "Use and Interpretation of Pressure-Flow Loops", Pulmonary Physiology Conference, Veterans Administration Hospital, Cleveland, Ohio, June, 1972
- [10] Barry N. Feinberg, "Modeling and Simulation in Pulmonary Medicine", Systems Engineering Division Seminar, Case Western Reserve University, Cleveland, Ohio, May, 1972
- [11] Barry N. Feinberg, "The Use of Mathematical Models in Physiology", Physics Seminar, Department of Physics, Cleveland State University, Cleveland, Ohio, May, 1971
- [12] Barry N. Feinberg, "A New Technique for the Estimation of Bronchial Compliance", City of Hope National Medical Center, Duarte, California, March, 1971
- [13] Barry N. Feinberg, "Use of the Plethysmograph in Estimating Bronchial Compliance", Department of Medicine, Veterans Administration Hospital, Cleveland, Ohio, March 1971



Resumé - Barry N. Feinberg, Ph.D, P.E.

- [14] Barry N. Feinberg, "A Model of Airway Dynamics and Its Use in the Detection of Obstructive Lung Disease", Department of Biomedical Engineering, CWRU, Cleveland, Ohio, April, 1970
- [15] Barry N. Feinberg, "The Use of Higher Mathematics 'in Medicine", Department of Medicine, Veterans Administration Hospital, Cleveland, Ohio, January, 1970

Honors and Awards

IEEE Third Millennium Medal Recipient

IEEE/Engineering in Medicine & Biology Society Service Award

Life FELLOW of the Institute of Electrical and Electronic Engineers

FELLOW of the American Institute for Medical and Biological Engineering

Best Paper Award in the issue, Journal of Clinical Engineering

Senior Distinguished Faculty Award, Cleveland State University, Cleveland Ohio

North Atlantic Treaty Organization (NATO) Senior Fellowship in Science, National Science Foundation

Scholarship, Four Year Undergraduate, University of Michigan, Ann Arbor, Michigan

President - Michigan Senior Engineering Honorary, University of Michigan, Ann Arbor, Michigan

Professional Society Activities

IEEE	Vice President - IEEE/Engineering in Medicine and Biology Society, 1989 - 1990
IEEE	Member - IEEE/Power Engineering Society
IEEE	Member - IEEE/Product Safety Engineering Society
CAS	Chicago Academy of Sciences - past member
ABET	Evaluator - Accreditation Board in Engineering and Technology (ABET), Program Evaluator for University Programs in Electrical, Computer and Biomedical Engineering
NSF	National Science Foundation - panel member for Biomedical Engineering and Aiding the Disabled Program, 1991
IFMBE	United States Clinical Engineering Representative to the International Federation of Medical and Biological Engineers, (IFMBE), for Alliance for Engineering in Medicine and Biology, 1984 to1991
Education Chair	World Congress on Medical Physics and Biomedical Engineering, 15th International Conference on Medical and Biological Engineering and the 8th International Conference on Medical Physics, August, 1988



Resumé - Barry N. Feinberg, Ph.D, P.E.

General Conference Chair	7th Annual IEEE/Engineering in Medicine and Biology Society Conference "Frontiers of Engineering and Computing in Health Care", Chicago, Illinois , September, 1985
IEEE	Member - IEEE/Engineering in Medicine and Biology Society - Administrative Committee, ADCOM, (nationally elected position) 1979 - 1985, 1987 to present.
IEEE	Member of the IEEE Health Care Engineering Policy Committee 1983-1988
IEEE	Associate Editor for Industrial Affairs, Engineering in Medicine and Biology Magazine
President	Indiana Chapter, IEEE -Engineering in Medicine and Biology Society, 1979 - 1980
Vice President	Indiana Chapter, IEEE - Engineering in Medicine and Biology Society 1978 - 1979
Chair	IEEE - Engineering in Medicine and Biology Society: ADCOM - Clinical Engineering Committee
Chair	IEEE - Engineering in Medicine and Biology Society CD-ROM Committee
Delegate	IEEE/EMBS Professional Engineering and EIT Examination Delegate
Assoc. Editor	Industrial Affairs, IEEE/Engineering in Medicine and Biology Magazine
Member	Standards Committee on Medical Instrumentation and Electrical Safety, Association for the Advancement of Medical Instrumentation
Vice Chairman	American Society for Engineering Education/Biomedical Engineering Division, 1983-1985
Chairman	International Certification Commission/Board of Examiners for Clinical Engineering Certification, 1980 - 1983
Member	International Certification Commission/Board of Examiners for Clinical Engineering Certification, 1978 - 1980
AAMI	Standards Committee on Medical Instrumentation and Electrical Safety and the Education Committee - Association for the Advancement of Medical Instrumentation
President	Clinical Engineering and Technology Association of Indiana, 1978

Biographical Listings

Who's Who in Technology, (North American Edition)
 American Men and Women of Science
 Who's Who in Technology Today
 American Men of Science
 Who's Who in Ohio



Resumé - Barry N. Feinberg, Ph.D, P.E.

Activities as Referee & Editor

Editorial Advisory Board - Medical Device and Diagnostic Industry, an international journal of medical devices and in vitro diagnostic manufacturing.

Editorial Review Board - Journal of Clinical Engineering - Quest Publication

Series CoEditor - CRC Press Handbooks on Engineering in Medicine and Biology with David Fleming, Boca Raton, Florida

Referee, Medical & Biological Engineering & Computing
(The Journal of the International Federation for Medical and Biological Engineering)

Referee, Journal of Biomechanics

Referee, CRC Press, Uniscience Series

Referee, IEEE Transactions on Biomedical Engineering

Referee, IEEE Transactions on Education

Referee, IEEE Spectrum Magazine

Referee, Journal of Clinical Engineering - Quest Publications

Book Reviewer - Addison-Westley Publishing Company

1. "Computers in the Practice of Medicine"
2. "Issues in Medical Computing"

Book Reviewer - Prentice - Hall, Englewood Cliffs, New Jersey

Book Reviewer - Medical Instrumentation, The Journal of AAMI

Proposal Reviewer - National Science Foundation, June, 1982

Course and Curriculum Development

Responsible for the development of the Clinical Engineering Program at Purdue University, West Lafayette, Indiana. This included the development of new courses and laboratories in the School of Electrical Engineering as well as coordinating the program with other departments at the university. The Clinical Engineering Program became the largest program of its kind in the United States.

A Hospital Simulation laboratory was developed for the program from grants received. It was equipped With up to date medical electronic equipment including a new X-ray machine used in the radiation engineering portion of the program.



Resumé - Barry N. Feinberg, Ph.D, P.E.

Listed are the courses that were developed specifically for the Clinical Engineering curriculum:

1. Hospital Electromedical Systems
2. Clinical Systems Laboratory
3. Clinical Engineering Practicum
4. Clinical Engineering Internship
5. Engineering of Medical Radiation Systems
6. Engineering of Medical Radiation Systems - Laboratory

Other Courses Taught in Electrical Engineering & Mathematics

1. Linear Circuit Analysis
2. Introduction to Electronic Analysis and Design
3. Integrated Circuit Operational Amplifiers
4. Analog Instrumentation Systems
5. Linear Systems Analysis
6. Linear Feedback Control Systems
7. Nonlinear Feedback Control Theory
8. Optimal Control Theory
9. Digital Systems & Computer Control
10. Computational Methods in Electrical Engineering
11. Analog & Hybrid Computations
12. Fortran Programming
13. Electromagnetic Field Theory
14. Transmission Lines and Networks
15. Applied Differential Equations
16. Calculus & Analytic Geometry
17. Introduction to Business Statistics
18. College Algebra

Contributions to Special Projects & Short Courses

- [1] Massachusetts Institute of Technology, Summer Program Short Course in Electromagnetic Field, Forces and Flows in Biology, 1984
- [2] Short Course Director and Lecturer, "Safety, Performance and Compliance Testing of Medical X-Ray Systems", Medical Center of Beaver County, Beaver, PA., December, 1983
- [3] Short Course Director, "Safety, Performance and Compliance Testing of Medical X-Ray Systems", James A. Picker Education Center, Cleveland, OH., December, 1982
- [4] Lecturer - Short Course, "X-Ray Systems: Theory and Principles of Operation", Association for the Advancement of Medical Instrumentation, Philadelphia, PA, October 1980, Washington, DC, May 1981, and San Francisco, CA., May 1982
- [5] Chairman - Clinical Engineering Workshop "Understanding the New Regulations on Hospital and Medical Equipment, Purdue University, July, 1978
- [6] Chairman - Clinical Engineering Workshop, July, 1978
- [7] Lecturer, Minority Introduction to Engineering, Purdue University, 1977
- [8] Lecturer, Purdue Accelerated Learning Program, Purdue University, 1977, 1978



Resumé - Barry N. Feinberg, Ph.D, P.E.

University Service Activities at Purdue University

- [1] Provided engineering consultation and safety testing of equipment to the departments of Psychology, Child Development and Family Planning & School of Veterinary Medicine, 1979 - 1981
- [2] Medical Equipment supervisor for the Cardiac Aid Station - Ross Ade Stadium and Mackey Arena at Purdue University, 1978 -1981
- [3] Clinical Engineering Consultant to the Purdue University Student Hospital
- [4] Faculty sponsor, Purdue Gymnastic Club, 1978

Committee Activities at Purdue University

- [1] Ph.D. Qualifying Examination Committee, 1977 - 1980
- [2] Bioengineering Committee, 1976 - 1981
- [3] Curriculum Committee, 1978 - 1979

Committee Activities at Cleveland State University

- [1] Rhodes Scholarship - University Representative
- [2] University Master Plan Committee
- [3] Chairman - Faculty Performance Subcommittee for the Master Plan Committee
- [4] University ad hoc committee on university computing services
- [5] Undergraduate Computations Curriculum Committee
- [6] College of Engineering computing committee
- [7] College of Engineering Budget Representative, budget committee
- [8] Electrical Engineering departmental graduate committee
- [9] Electrical Engineering departmental promotions and tenure committee

Corporate Experience - Colgate/Kendall Company

Responsible for New Venture medical device research projects.

Senior scientific member of the technology strategy management planning group in critical care product development.

Scientific and engineering project director for a noninvasive, semicontinuous arterial blood pressure monitor for critical care and surgical areas. Produced a working prototype of the device that was tested in hospitals.

Initiated and directed research in the use of localized application of hyperbaric oxygen in the treatment of non-healing wounds. Experiments proved the tissue penetration of hyperbaric oxygen, validated the experimental design of apparatus used and indicated the type of clinical experiments that were needed to continue the research.

Initiated research into the development of active wound dressings using pulsed, electromagnetic radiation to stimulate and accelerate wound healing.

Implemented research in the use of infrared and near infrared reflection and transmission characteristics of perfused tissue for the determination of hemoglobin saturation of arterial blood.

Investigated the use of low power Helium-Neon lasers in the stimulation of molecular biological reactions as an aid to accelerating wound healing.

Conducted product engineering evaluations in the licensing of new products.

Scientific and engineering advisor to Colgate/Kendall Company in support of new business acquisitions and joint venture research.

Initiated the University/Kendall cooperative research and post doctoral fellowship program.

Created 38 new scientific and engineering ideas submitted for patenting at the Kendal Research Lab.

Grants and Contracts

- [1] U.S. Air Force School of Aerospace Medicine, "Review of Procedures/Requirements for Life Support Test and Evaluations of Oxygen Delivery Systems in High Performance Aircraft", February, 1980
- [21] Food and Drug Administration, HEW, "Study and Review of Performance Standards for Electrocardiographs", March, 1980
- [31] Picker International, Cleveland, Ohio, Corporate Grant for the Medical Radiation Program, School of Electrical Engineering, Purdue University, July, 1980
- [4] IVAC Corporation, Corporate Grant for the Clinical Engineering Program in the School of Electrical Engineering, Purdue University, June, 1979
- [5] Purdue University Foundation Foreign Travel grant for the XII International Conference on Medical and Biological Engineering, Jerusalem, Israel, August, 1979
- [6] Equipment grants to Purdue Clinical Engineering Program for the Hospital Simulation Laboratory, 1977-1979
- [7] Cleveland Foundation Grant, Cleveland, Ohio, "Development of a Clinical Engineering Program and Laboratory", July, 1974
- [8] National Science Foundation/North Atlantic Treaty Organization, (NATO), Senior Fellowship in Science for research at Catholic University of Leuven, Leuven, Belgium, 1973
- [9] Cleveland State University Grant, "Use of Mathematical Models in the Analysis of Obstructive Lung Disease", Cleveland State University, Cleveland, Ohio, 1970

Courses Taken in Mechanical Engineering

Analytic Mechanics of Static Mechanical Systems
Dynamics of Physical Mechanical Systems
Design of Machines
Thermodynamics
Fluid Mechanics
Strength of Materials
Chemical Metallurgy
Engineering Materials
Mechanical Drawing

Courses Taught That Include Aspects of Mechanical Engineering

Differential Equations - Taught aspects of mechanical system vibration analysis of rectilinear and rotation motion.

Feedback Control Systems - Time and frequency domain analysis of mechanical feedback systems. Transient, steady state and stability analysis of mechanical systems.

Nonlinear Feedback Control Systems - Stability aspects of mechanical positioning systems with inertia to viscous damping coefficients. Limit cycle instability of mechanical systems.

EXHIBIT N

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

THE HOLMES GROUP, INC.,

05 : 11367 REK

Civil Action No.

Plaintiff

COMPLAINT

v.

WEST BEND HOUSEWARES, LLC and
FOCUS PRODUCTS GROUP, L.L.C.

Defendants.

Jury Trial Demanded

RECEIPT # 65278
AMOUNT \$ 250
SUMMONS ISSUED 405
LOCAL RULE 4.1
WAIVER FORM
MCF ISSUED
BY DPTY. CLK. Fum
DATE 6/28/05

Plaintiff, THE HOLMES GROUP, INC., by way of its Complaint against defendants,

THE WEST BEND COMPANY and FOCUS PRODUCTS GROUP, L.L.C., alleges and says:

THE PARTIES

1. Plaintiff, THE HOLMES GROUP, INC. ("HOLMES"), is a Massachusetts corporation having a principal place of business at One Holmes Way, Milford, Massachusetts 01757.
2. Upon information and belief, defendant, FOCUS PRODUCTS GROUP, L.L.C. ("FOCUS") is a limited liability Illinois corporation having a principal place of business at 120 Lakeview Parkway, Vernon Hills, Illinois 60061 and defendant, WEST BEND HOUSEWARES, LLC is a limited liability Illinois corporation having a principal place of business at 120 Lakeview Parkway, Vernon Hills, Illinois 60061, and is a wholly owned subsidiary of FOCUS; (hereinafter collectively referred to as "WEST BEND").

SUBJECT MATTER JURISDICTION

3. Jurisdiction over the subject matter of the within Complaint is vested in the United States District Court pursuant to 28 U.S.C. § 1331 [general federal question jurisdiction]

and 28 U.S.C. § 1338(a) [special federal question jurisdiction].

VENUE

4. Venue over the within action is proper in the federal judicial district comprising the United States District Court for the District of Massachusetts pursuant to 28 U.S.C. § 1391(b) and 28 U.S.C. § 1400(b).

PATENT INFRINGEMENT

5. HOLMES is the owner by assignment of all right, title, and interest in and to United States Letters Patent No. 6,573,483 B1 (hereinafter referred to as "the '483 patent") entitled, "Programmable Slow-Cooker Appliance". A copy of the '483 patent is attached hereto as Exhibit A.

6. The '483 patent was duly and legally issued on June 2, 2003 to HOLMES. The '483 patent remains in full force and effect.

7. HOLMES is the owner by assignment of all right, title, and interest in and to United States Letters Patent No. 6,740,855 B1 (hereinafter referred to as "the '855 patent") entitled, "Programmable Slow-Cooker Appliance". A copy of the '855 patent is attached hereto as Exhibit B.

8. The '855 patent was duly and legally issued on May 25, 2004 to HOLMES. The '855 patent remains in full force and effect.

9. HOLMES has and continues to distribute, market, and sell programmable slow cooker appliances covered by the claims of the '483 patent and the '855 patent (hereinafter collectively referred to as "the patents-in-suit").

10. On information and belief, WEST BEND has manufactured, imported, distributed, marketed, offered for sale, and sold certain slow cooker appliances (hereinafter "the

accused products") covered by the claims of the patents-in-suit. At least one such accused product is identified as the WEST BEND® Housewares 6-Quart Electronic Crockery Cooker, Model 84386. A copy of selected pages from the owner's manual for the accused product is attached as Exhibit C.

11. The activities of WEST BEND constitute direct infringement, contributory infringement and/or actively inducing infringement of the patents-in-suit.

12. WEST BEND's infringement of the patents-in-suit has been without license from HOLMES and in violation of HOLMES' patent rights, and it is believed that WEST BEND will continue to infringe HOLMES' patent rights unless enjoined by this Court.

13. WEST BEND's acts of infringement have been willful and deliberate, with full knowledge of HOLMES' patent rights.

14. As a result of WEST BEND's willful infringement of the patents-in-suit, HOLMES has been damaged and will continue to be damaged in an amount to be determined at trial. HOLMES has suffered and will continue to suffer irreparable injury unless the infringing activities of WEST BEND are enjoined.

15. By virtue of WEST BEND's willful and deliberate infringement, this is an "exceptional case" within the meaning of 35 U.S.C. § 285.

WHEREFORE, HOLMES prays for the following relief:

- A. Judgment for HOLMES on its cause of action for patent infringement.
- B. Preliminary and permanent injunction enjoining WEST BEND, its officers, directors, agents, employees, and all those in active concert or participation with them who receive actual notice of the judgment by personal service or otherwise, from making, using, importing, offering for sale, and selling infringing fans and from otherwise infringing,

contributing to infringement, and actively inducing infringement of the patents-in-suit.

C. An award of compensatory and punitive damages to HOLMES by reason of the wrongs committed by WEST BEND, including an award of increased damages pursuant to 35 U.S.C. § 284, for defendant's willful and deliberate patent infringement.

D. An award of costs of this action together with HOLMES' attorneys' fees pursuant to 35 U.S.C. § 285.

E. An assessment of interest on the damages so computed.

F. Such other and further relief as this Court deems just and proper.

PLAINTIFF DEMANDS A TRIAL BY JURY.

THE HOLMES GROUP, INC.

By its Attorneys,

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nnesgos@pbl.com

Jennifer Finger

BBO No. 641830

jfinger@pbl.com

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Prudential Tower, 800 Boylston Street

Boston, Massachusetts 02199-8004

Telephone: (617) 973-6100

Facsimile: (617) 367-2315

Dated: June 28, 2005

Of Counsel:

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CRHDocket@hoffmannbaron.com

Glenn T. Henneberger, Esq.

GTHDocket@hoffmannbaron.com

HOFFMANN & BARON, LLP

6900 Jericho Turnpike

Syosset, New York 11791-4407

Telephone: (516) 822-3550

Facsimile: (516) 822-3582

EXHIBIT O



US00D444993S

(12) **United States Design Patent** (10) **Patent No.: US D444,993 S**
Dobson et al. (45) **Date of Patent: ** Jul. 17, 2001**

(54) **COOKER**

* cited by examiner

(75) Inventors: **William C. Dobson; Scott T. Pollnow,**
 both of West Bend, WI (US)

Primary Examiner—Caron D. Veynar
 (74) *Attorney, Agent, or Firm*—Michael Best & Friedrich LLP

(73) Assignee: **Premark WB Holdings, Inc.,**
 Wilmington, DE (US)

(57) **CLAIM**

(*) Notice: This patent is subject to a terminal disclaimer.

The ornamental design for a cooker, as shown and described.

(**) Term: **14 Years**

DESCRIPTION

(21) Appl. No.: **29/120,883**

FIG. 1 is a perspective view of a cooker constructed in accordance with one preferred embodiment of the invention; FIG. 2 is an elevation view of the front of the cooker shown in FIG. 1;

(22) Filed: **Mar. 28, 2000**

FIG. 3 is an elevation view of the rear of the cooker shown in FIGS. 1 and 2;

(51) **LOC (7) Cl.** **07-02**

FIG. 4 is an elevation view of the right of the cooker shown in FIGS. 1, 2 and 3;

(52) **U.S. Cl.** **D7/354**

(58) **Field of Search** D7/323, 354-361;
 99/324, 325, 340, 347, 403, 413, 419, 410,
 411

FIG. 5 is an elevation view of the left of the cooker shown in FIGS. 1, 2, 3 and 4;

(56) **References Cited**

FIG. 6 is a top plan view of the cooker shown in FIGS. 1, 2, 3, 4 and 5; and,

U.S. PATENT DOCUMENTS

FIG. 7 is a bottom plan view of the cooker shown in FIGS. 1, 2, 3, 4, 5 and 6.

D. 104,914 * 6/1937 Coss D7/360
 D. 416,434 * 11/1999 Pollnow D7/360
 D. 420,246 * 2/2000 Alonge et al. D7/360
 D. 425,360 * 5/2000 Dobson et al. D7/360
 D. 429,596 * 8/2000 Hlava et al. D7/360

The broken line showings in FIGS. 1-7 are for illustrative purposes only and form no part of the claimed design.

1 Claim, 7 Drawing Sheets

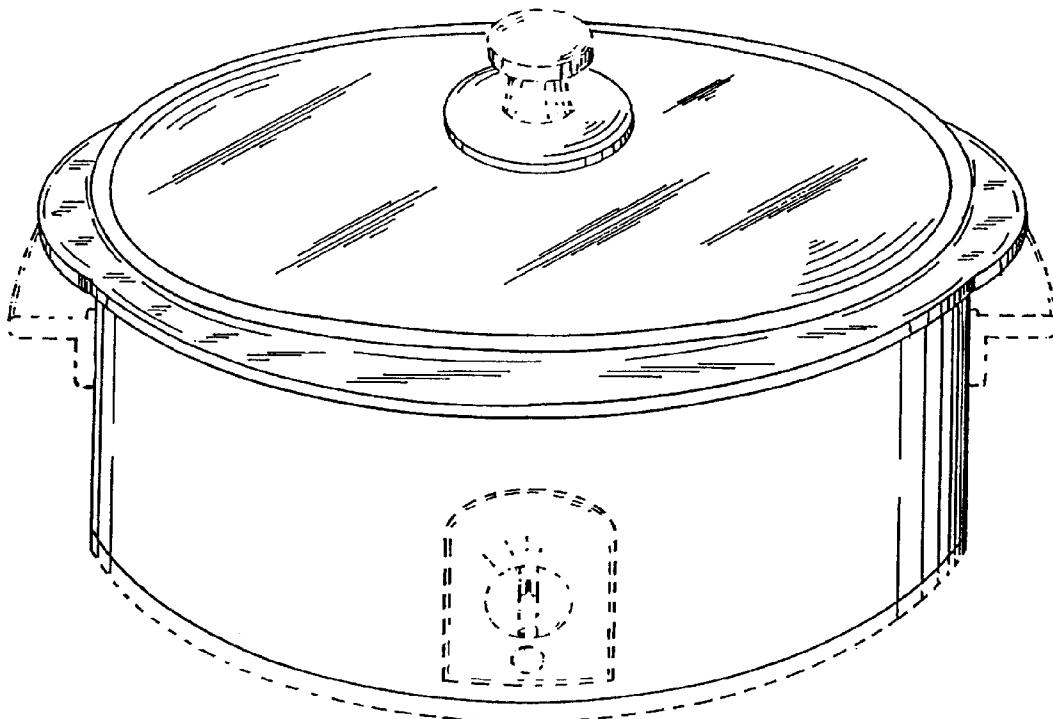


EXHIBIT C

U.S. Patent

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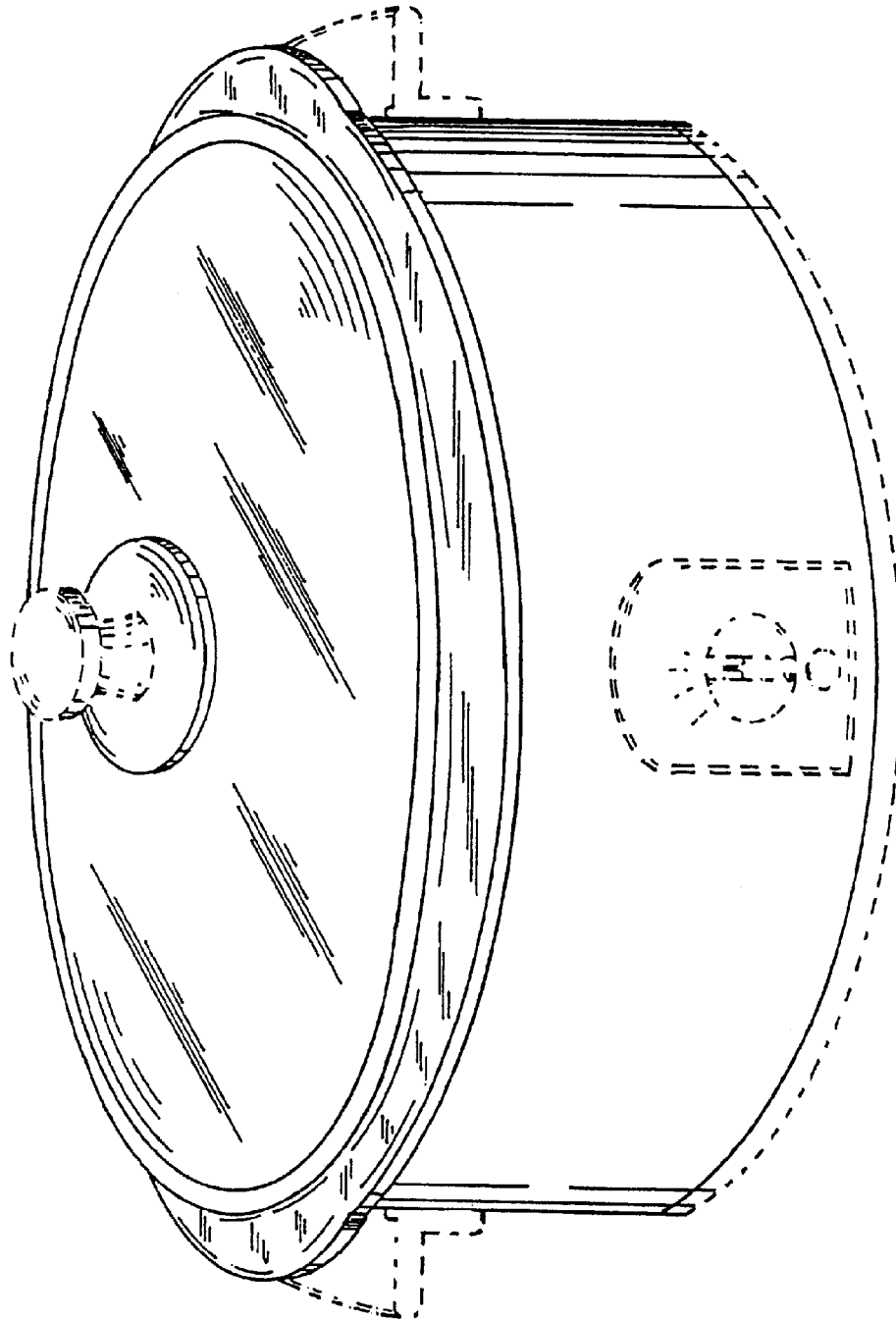


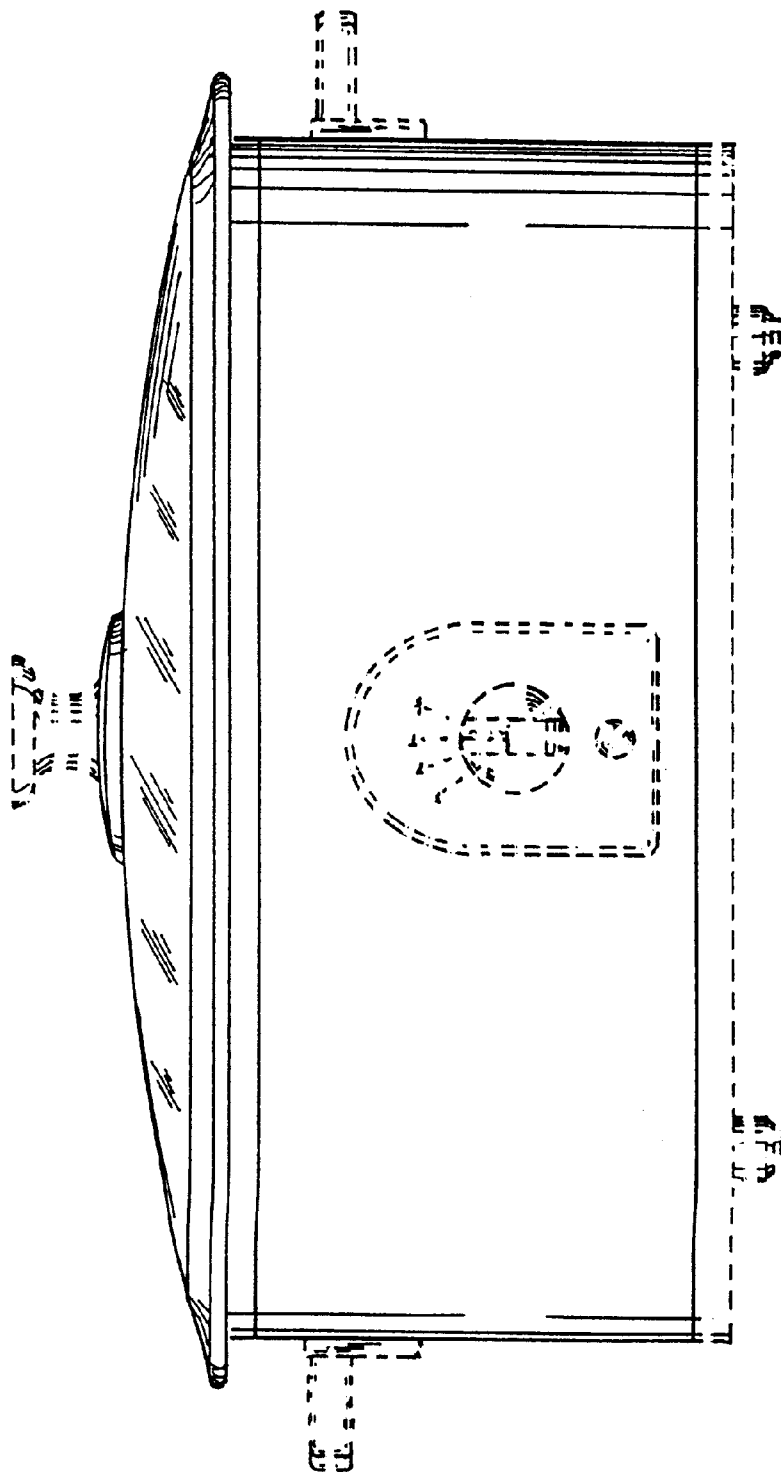
Fig. 1

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US D444,993 S



U.S. Patent

Jul. 17, 2001

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US D444,993 S

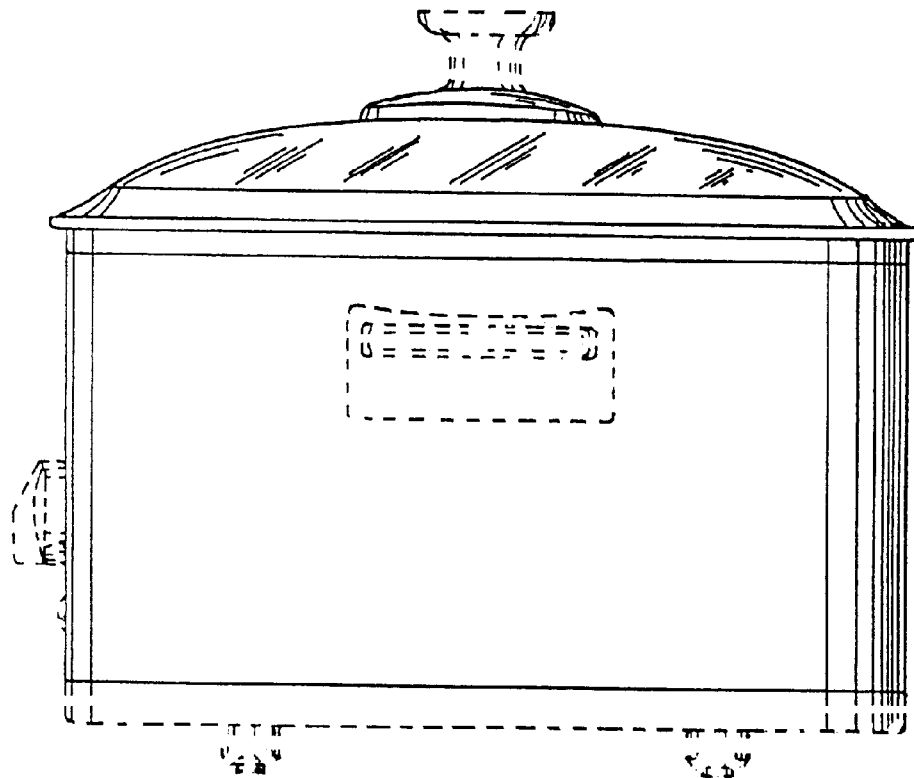


Fig. 4

U.S. Patent

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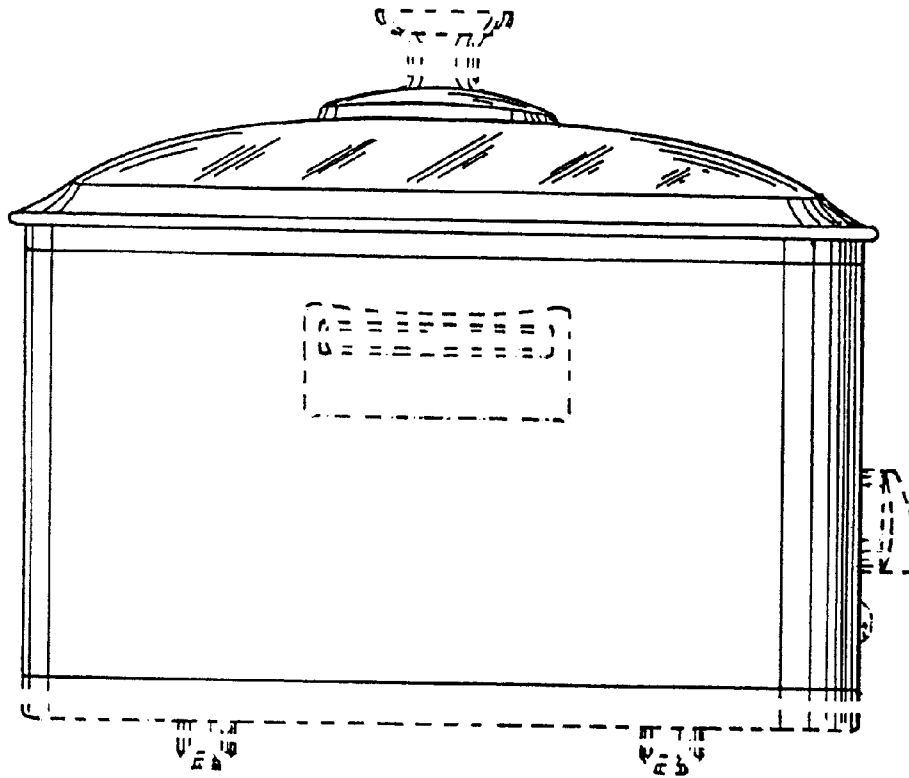


Fig. 5

U.S. Patent

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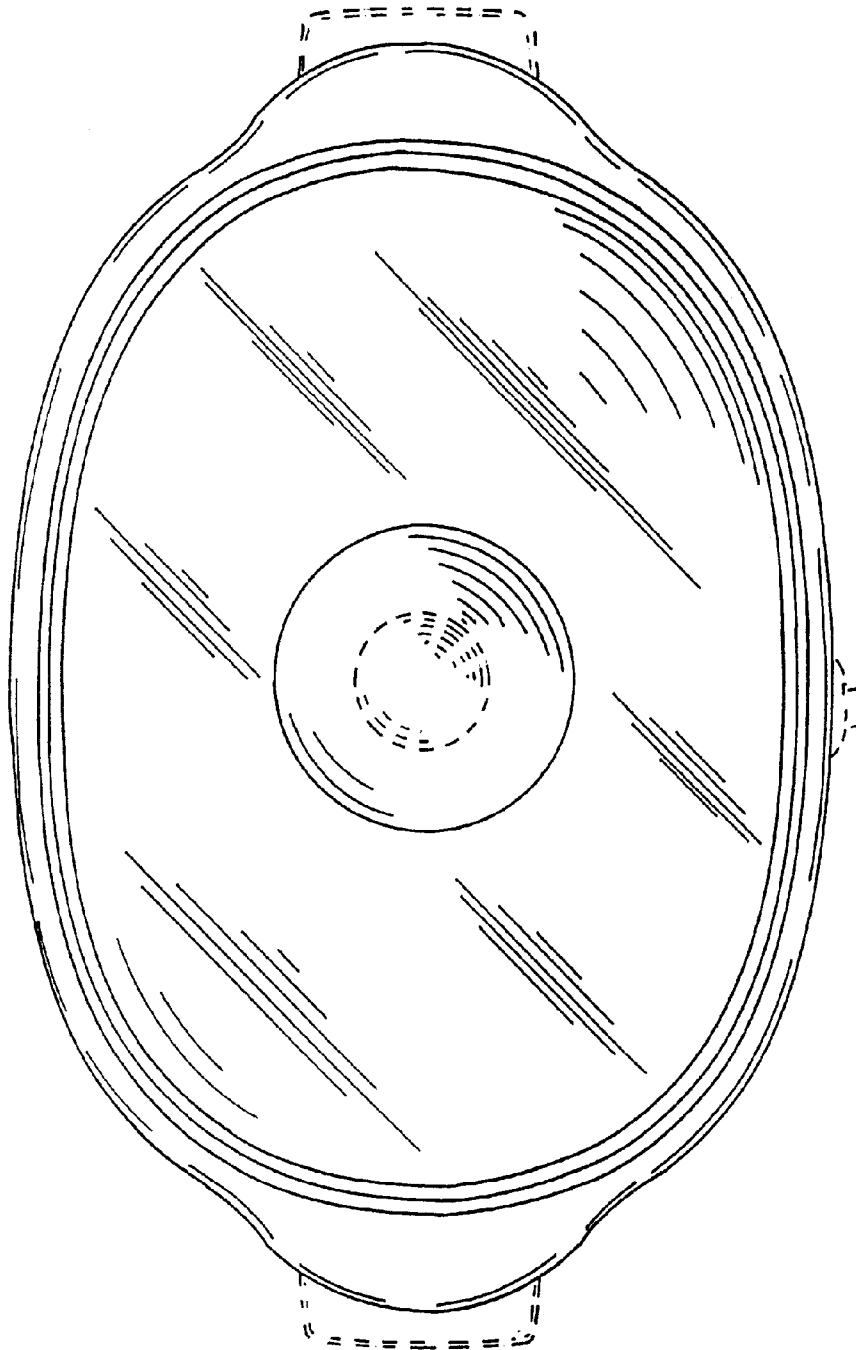


Fig. 6

U.S. Patent

Jul. 17, 2001

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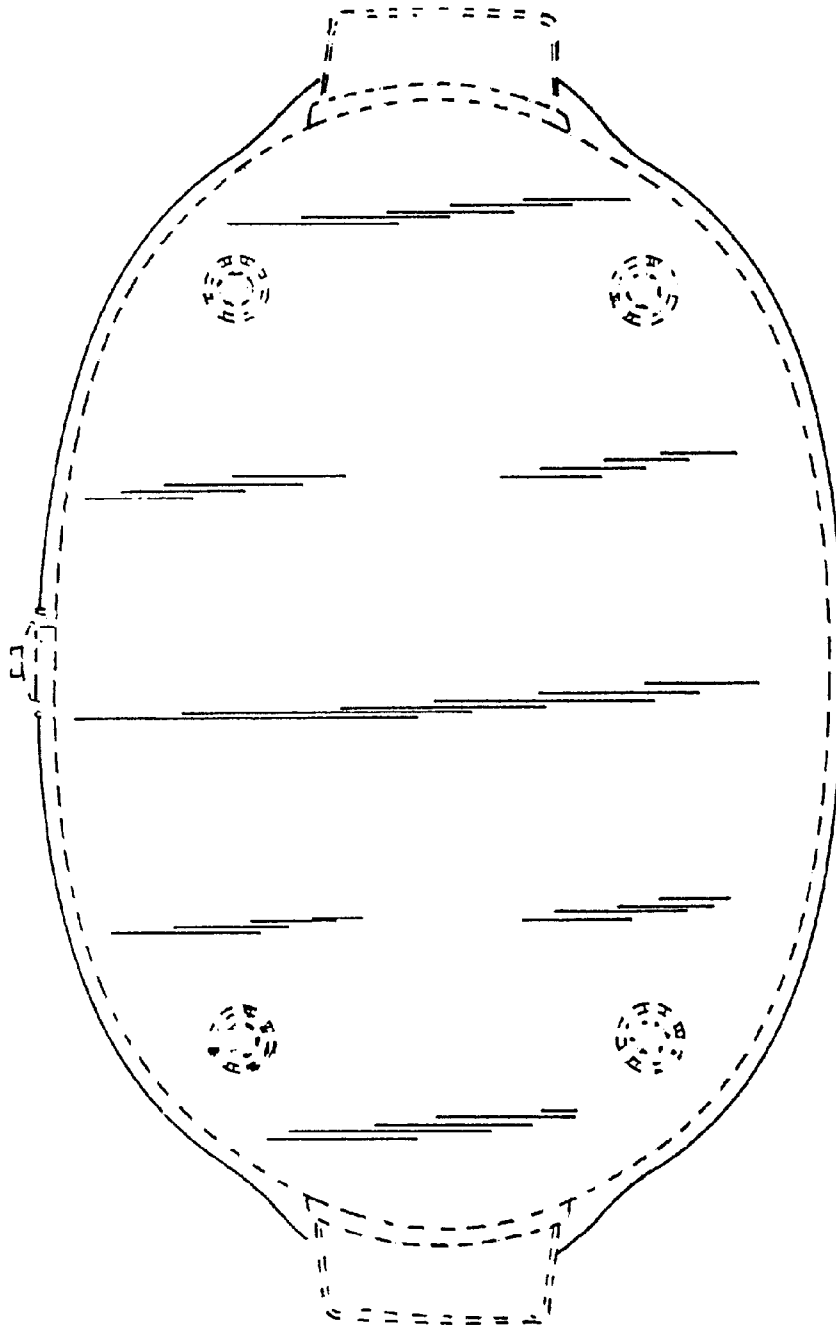


Fig. 7

EXHIBIT P

**IN THE UNITED STATES DISTRICT COURT FOR
THE DISTRICT OF MASSACHUSETTS**

THE HOLMES GROUP, INC.,)	
)	
Plaintiff,)	CA No. 05-CV-11367-REK
)	(Alexander, M.J.)
v.)	
)	
WEST BEND HOUSEWARES, LLC, and)	
FOCUS PRODUCTS GROUP, LLC)	
)	
)	
Defendant.)	

**FOCUS PRODUCTS GROUP, LLC'S
ANSWER TO COMPLAINT AND COUNTERCLAIM**

Defendant Focus Products Group, LLC, ("Focus") answers each numbered paragraph of the complaint of plaintiff The Holmes Group, Inc. ("Holmes") as follows:

ANSWER

1. Focus has insufficient knowledge or information to form a belief as to the truth of the allegations of Paragraph 1 of the Complaint and denies the allegations on that basis.
2. Focus admits that it is a limited liability company organized under the laws of Illinois having a principal place of business at 120 Lakeview Parkway, Vernon Hills, Illinois 60061. West Bend Housewares, LLC is also a limited liability company organized under the laws of Illinois, and West Bend Housewares, LLC is a wholly-owned subsidiary of Focus. Focus denies the remaining allegations of Paragraph 2 of the Complaint.

3. Paragraph 3 of the Complaint states conclusions of law to which no answer is required. To the extent an answer is required, however, Focus admits the allegations of Paragraph 3 of the Complaint.

4. Paragraph 4 of the Complaint states conclusions of law to which no answer is required. To the extent an answer is required, however, Focus admits the allegations of Paragraph 4 of the Complaint.

5. Focus admits that United States Patent No. 6,573,483 (“the ‘483 patent”) is entitled “Programmable Slow-Cooker Appliance” and the ‘483 patent indicates that it was assigned to The Holmes Group, Inc. Focus lacks sufficient knowledge or information to admit or deny the remaining allegations of Paragraph 5 of the Complaint and thus denies them.

6. Focus denies the allegations of Paragraph 6 of the Complaint.

7. Focus admits that United States Patent No. 6,740,855 (“the ‘855 patent”) is entitled “Programmable Slow-Cooker Appliance” and the ‘855 patent indicates that it was assigned to The Holmes Group, Inc. Focus lacks sufficient knowledge or information to admit or deny the remaining allegations of Paragraph 7 of the Complaint and thus denies them.

8. Focus denies the allegations of Paragraph 8 of the Complaint.

9. Focus has insufficient knowledge or information to form a belief as to the truth of the allegations of Paragraph 9 of the Complaint and denies the allegations on that basis.

10. Focus admits that Exhibit C to the Complaint purports to comprise copies of selected pages from the owner’s manual for the WEST BEND® Housewares 6-Quart Electronic Crockery Cooker, Model 84386. Focus denies the remaining allegations of Paragraph 10 of the Complaint.

11. Focus denies the allegations of Paragraph 11 of the Complaint.

12. Focus admits that it has no license from Holmes, but denies the remaining allegations of Paragraph 12 of the Complaint.

13. Focus denies the allegations of Paragraph 13 of the Complaint.

14. Focus denies the allegations of Paragraph 14 of the Complaint.

15. Focus denies the allegations of Paragraph 15 of the Complaint.

FIRST AFFIRMATIVE DEFENSE

Each claim of the '483 and '855 patents is invalid because it fails to meet the conditions for patentability set for in 35 U.S.C. §§ 101 et seq., including, without limitation, 35 U.S.C. §§ 102 and 103, and for failing to meet the requirements of 35 U.S.C. § 112.

SECOND AFFIRMATIVE DEFENSE

Focus has not infringed, induced infringement of, or contributorily infringed any valid claim of the '483 or '855 patents.

THIRD AFFIRMATIVE DEFENSE

Focus has not willfully infringed the '483 patent or the '855 patent.

FOURTH AFFIRMATIVE DEFENSE

Focus reserves the right to state additional defenses as they become known during discovery in this litigation.

COUNTERCLAIM

The Parties and Jurisdiction

1. Focus Products Group, LLC ("Focus") is a limited liability company organized under the laws of Illinois with a principal place of business at 120 Lakeview Parkway, Vernon Hills, Illinois 60061.

2. On information and belief and as stated in its Complaint, The Holmes Group, Inc. (“Holmes”) is a Massachusetts corporation having a principal place of business at One Holmes Way, Milford, Massachusetts 01757.

3. This Court has jurisdiction over this Counterclaim pursuant to 28 U.S.C. §§ 1331 and 1338(a). This Counterclaim also arises under 28 U.S.C. §§ 2202 and 2202 and the Patent Laws of the United States, 35 U.S.C. § 1, et seq.

4. Venue is proper in this district under 28 U.S.C. §§ 1391.

COUNT I – Declaration of Invalidity of the ‘483 Patent

5. Focus incorporates by reference the allegations of paragraph 1-4 of this Counterclaim as though fully set forth herein.

6. An actual and justiciable controversy has arisen and now exists between Focus and Holmes concerning whether the ‘483 patent is valid. By its Complaint, Holmes has asserted that the ‘483 patent is valid and has asserted a purported claim alleging infringement of the ‘483 patent by Focus.

7. Focus has denied Holmes’s claim of infringement and has asserted that the ‘483 patent is invalid for failure to meet the conditions for patentability set forth in, or requirements of, one or more provisions of the Patent Laws of the United States, including, without limitation, 35 U.S.C. §§ 101, 102, 103 and 112.

8. Absent a declaration that the ‘483 patent is invalid, Holmes will continue to wrongfully assert the ‘483 patent against Focus in violation of the laws and contrary to the public policy of the United States, and will thereby continue to cause Focus irreparable injury and damage.

9. Because the above activities and actions have created an actual and justiciable controversy, Focus seeks a declaration that the ‘483 patent is invalid.

COUNT II – Declaration of Noninfringement of the ‘483 Patent

10. Focus incorporates by reference the allegations of paragraphs 1-4 of this Counterclaim as though fully set forth herein.

11. An actual and justiciable controversy has arisen and now exists between Focus and Holmes concerning whether Focus infringes any rights Holmes claims to have under the ‘483 patent. By its Complaint, Holmes has asserted a purported claim alleging infringement of the ‘483 patent by Focus.

12. Focus has denied Holmes’s claim of infringement. Focus has not infringed and is not now infringing any claims of the ‘483 patent and has not contributorily infringed or induced infringement of the ‘483 patent.

13. Because the above activities and actions have created an actual and justiciable controversy, Focus seeks a declaration that it does not infringe the ‘483 patent.

COUNT III – Declaration of Invalidity of the ‘855 Patent

14. Focus incorporates by reference the allegations of paragraph 1-4 of this Counterclaim as though fully set forth herein.

15. An actual and justiciable controversy has arisen and now exists between Focus and Holmes concerning whether the ‘855 patent is valid. By its Complaint, Holmes has asserted that the ‘855 patent is valid and has asserted a purported claim alleging infringement of the ‘855 patent by Focus.

16. Focus has denied Holmes’s claim of infringement and has asserted that the ‘855 patent is invalid for failure to meet the conditions of patentability in, or requirements of, one or more provisions of the Patent Laws of the United States, including, without limitation, 35 U.S.C. §§ 101, 102, 103 and 112.

17. Absent a declaration that the '855 patent is invalid, Holmes will continue to wrongfully assert the '855 patent against Focus in violation of the laws and contrary to the public policy of the United States, and will thereby continue to cause Focus irreparable injury and damage.

18. Because the above activities and actions have created an actual and justiciable controversy, Focus seeks a declaration that the '855 patent is invalid.

COUNT IV – Declaration of Noninfringement of the '855 Patent

19. Focus incorporates by reference the allegations of paragraphs 1-4 of this Counterclaim as though fully set forth herein.

20. An actual and justiciable controversy has arisen and now exists between Focus and Holmes concerning whether Focus infringes any rights Holmes claims to have under the '855 patent. By its Complaint, Holmes has asserted a purported claim alleging infringement of the '855 patent by Focus.

21. Focus has denied Holmes's claim of infringement. Focus has not infringed and is not now infringing any claims of the '855 patent and has not contributorily infringed or induced infringement of the '855 patent.

22. Because the above activities and actions have created an actual an justiciable controversy, Focus seeks a declaration that it does not infringe the '855 patent.

JURY DEMAND

Focus demands a trial by jury on all matters and issues triable by a jury.

REQUESTED RELIEF

WHEREFORE, Focus prays that:

- (a) the Court adjudge the claims of the '483 and '855 patents to be invalid, not infringed and/or unenforceable;

- (b) the Court dismiss Holmes's Complaint with prejudice;
- (c) the Court declare this to be an exceptional case under 35 U.S.C. § 285 and award Focus its reasonable attorneys' fees;
- (d) the Court award Focus its costs; and
- (e) the Court grant Focus any further and additional relief as this Court deems just and proper.

Dated: August 23, 2005

FOCUS PRODUCTS GROUP, LLC

By its attorneys,

/s/ Erik P. Belt

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